OFF-HIGHWAY VEHICLE MANAGEMENT IN THE MONACHE MEADOW AREA

Charles F. Robinson
Recreation Officer
Inyo National Forest
Mt. Whitney Ranger District
P. O. Box 8
Lone Pine, CA 93545
619-876-5542

Clemson Class of 1986
April 14, 1987 -- Final Copy

This paper was prepared as a student project in partial fulfillment of the requiremens of the Professional Development for Outdoor Recreation Management Program at Clemson University. It in no way reflects USDA Forest Service policy nor are the opinions expressed those of anyone other than the author.

ABSTRACT

Author: Charles F. Robinson
Recreation Officer
Inyo National Forest
Mt. Whitney Ranger District
P. O. Box 8
Lone Pine, CA 93545
619-876-5542

Title: Off-Highway Vehicle Management in the Monache Meadow Area

Abstract: The Monache Meadow area of the Inyo National Forest was recently released from wilderness study back to multiple use management. This small (13,500 acre) area used by OHV's is sensitive to this use as it is surrounded on 3 sides by wilderness. It is one of the largest meadow systems in California and its natural beauty and primitive setting require careful analysis and planning for both recreation and resource needs.

A grant from the State of California Green Sticker program was received to apply OHV licensing fees to solve problems of existing OHV routes dead-ending at new wilderness boundaries which caused vehicle trespass in wilderness, rehabilitate damaged areas along existing routes, and create additional OHV opportunities. An Interdisciplinary Team approach was used. A public scoping letter was used to establish public issues. Preliminary field reconnaissance of proposed routes was completed.

Five alternatives were developed: no action, reconstruction of existing routes to mitigate resource damage, construction of new 4WD roads, construction of new motorbike trails, and preferred. Each alternative was comprised of multiple segments, each one analyzed for environmental consequences where appropriate. Evaluation criteria were used. The preferred alternative included the best environmental/recreational mix of all segments. It also best met the direction in the draft Forest Plan.

Major concerns were recreational and scenic values, wildlife values (especially mule deer), and archaeological values.

Subsequent steps of implementation of the preferred alternative were discussed.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES

LIST OF MAPS

EXECUTIVE SUMMARY

Title: Off-Highway Vehicle Management in the Monache Meadow Area

Author: Charles F. Robinson
Recreation Officer
Inyo National Forest
Mt. Whitney Ranger District
P. O. Box 8
Lone Pine, CA 93545
619-876-5542

Summary: The Kern Plateau of southeastern California is contained in portions of the Inyo and Sequoia National Forests. Off-highway vehicle (OHV) use there has increased significantly since the early 1970's. A 13,500 acre area in and around Monache Meadow was the study area for this report. It is characterized by one of the largest meadow systems in California surrounded by brush and timber covered mountains.

In 1984, wilderness legislation released the study area back to multiple use management. The Mt. Whitney Ranger District then applied for granting of California Off-Highway Vehicle (Green Sticker) licensing funds to rehabilitate damaged portions of existing routes. Also envisioned was construction of new four wheel drive (4WD) roads and motorbike trails to make loop routes out of existing dead ends at newly created wilderness boundaries and to create additional OHV opportunities. The grant was approved, with partial funding, in 1986. In the summer of 1986, I organized and lead an Interdisciplinary (ID) Team to study the problem and recommend a preferred alternative to the Forest Supervisor. The team included a District Recreation Officer from Sequoia National Forest to assure coordinated planning efforts. I made several field trips to recon possible route locations and was assisted by an engineer and an archaeologist. Other team members participated. These field surveys yielded route proposals screened only for engineering and archaeological feasibility.

Also during the summer, I developed and mailed out a public scoping letter requesting interested individuals and groups to respond with their issues and concerns about OHV use in the area. Public response was strong, with a leaning toward curtailing expansion of routes to preserve existing scenic values and semi-primitive recreational opportunities.

Subsequent team meetings involved analysis of public letters to determine issues. The development of management concerns and opportunities was the next step. Finally, evaluation criteria were developed and applied to each proposed route.

Five alternatives were developed: 1) No action; 2) Reconstruction of existing routes to mitigate resource damage (10.9 miles); 3) Construction of new 4WD roads (5.8 miles); 4) Construction of new motorbike trails (9.5 miles); and 5) Preferred alternative (4.9 miles).

Evaluation criteria included: 1) Acres in ROS Classes Semi-Primitive Nonmotorized and Semi-Primitive Motorized; 2) Percent use increase; 3) OHV route mileage; 4) Loops at wilderness boundaries; 5) Percent change in deer use; and 6) Existing damage repaired. These criteria were helpful in ranking each alternative and in selecting the best mix of routes to be the preferred alternative.

These criteria were developed from issues, concerns, opportunities, and the Draft Forest Plan direction for the area. The area is traversed by a candidate Wild and Scenic River; this became a consideration.

Major concerns were recreational and scenic values, wildlife values (especially mule deer), and archaeological values.

I recommend selection and implementation of the preferred alternative. It offers increased recreational opportunities for the OHV user while satisfying environmental concerns of other users and substantially solving wilderness trespass and existing route damage problems.

The next step is formal field engineering surveys of chosen routes, coordinated with on-going surveys for threatened and endangered and sensitive plants plus sensitive animals, and cultural resources and visual impacts. After that, reconstruction and construction activities can begin. All funds are to be expanded by 1991.

MY ROLE IN THIS FIELD PROJECT

My role in this Monache OHV project started in the spring of 1986 when I got my District Ranger's approval to pursue this project as my field project for the Clemson short course. My interest in doing this project as my Clemson field project was based on the controversial nature of recreation use in this small, scenic peninsula of non-wilderness land and the need to plan for mitigating existing resource damage. Prior to that time, I had become familiar with the Monache area and its recreational problems and unsurpassed scenic beauty through numerous visits there. This kindled my interest in conducting this major environmental analysis. I acted as reviewer of the Monache Green Sticker proposal written by my key assistant in 1984. He would have normally written this environmental assessment (as dispersed recreation is part of his position description), but when I approached him with my interest in doing so, he readily consented.

During the spring and summer of 1986, I selected and convened the ID Team to assist in this environmental analysis. I wrote, and the team reviewed, the public scoping letter sent to interested parties. Concurrently, I had an active summer in the field doing route reconnaissance work with an engineer and archaeologist for a total of approximately 20 days. Most of the ID Team convened for a field review of proposed routes in October.

There were a number of ID Team meetings held in the summer, fall, and winter. Together, we coded public responses to the scoping letter to represent public issues. The team also developed management concerns and opportunities. The idea of creating sub-parts under each alternative was developed with the intent of allowing the decisionmaker (Forest Supervisor) the latitude to select a mix of these sub-parts to develop his own preferred alternative. The intent was to not lock him into choosing the limited offerings of a single alternative (i.e., rehabilitation only, construct 4WD only, etc.). When I advised him of this approach, he said he preferred that the ID Team should select a mix and present it to him as a preferred alternative. Thus, Alternative 5 was born. Evaluation criteria were developed and applied to each alternative.

I wrote the Purpose and Alternative sections by myself. I also wrote the recreation, wild and scenic river, and wilderness portions of the Affected Environment section by myself. I wrote these same sections plus access and socio-economic by myself for the Environmental Consequences section. In conjunction with others, I wrote the air, geology, noise, visuals, administration and special use areas, cultural resources, protection and law enforcement, and private land sections. Specialists on the District wrote the watershed, biological environment, and range sections, which I then edited. I wrote all other pieces of the report not connected to a specific discipline.

I. PURPOSE AND NEED FOR ACTION

Recreational use of off-highway vehicles (OHV's) in eastern California has become increasingly popular in the last twenty years. The Monache Meadow area of the Kern Plateau, located on the Inyo National Forest, has felt the effect of this increase. See Map 1. The Endangered Wilderness Act of 1978 established the Golden Trout Wilderness which bounded the west and north sides of Monache. In late 1984, Congress passed the California Wilderness Act establishing the South Sierra Wilderness which bounded the east side of the Monache area. The 1984 Act contained language specifically releasing the Monache area, proposed for wilderness designation in the legislation, back to multiple use management by the Forest Service. Together, these two wildernesses border the Monache area on three sides, making it a small peninsula of non-wilderness land on the Inyo National Forest that is open to OHV use. This is a remnant of a much larger OHV use area prior to wilderness designation. Vehicle access to this 13,450-acre Monache Off-Highway Vehicle Study Area (MOHVSA) is from the south via a four wheel drive (4WD) road on the Cannell Meadow Ranger District of the Sequoia National Forest. See Map 2.

The new wilderness boundaries have created some dead-end situations for existing roads and trails. Resultant vehicle trespass in wilderness has created a law enforcement and resource protection problem.

In addition, existing routes were generally pioneered through use rather than developed through a proper route selection and design process. This factor has resulted in routes which cannot absorb the current heavy use impacts. Causeways built for the occasional traveler in the past are now in need of reconstruction. Portions of routes which cross sensitive wet meadow areas need rerouting or hardening to rehabilitate the meadow damage.

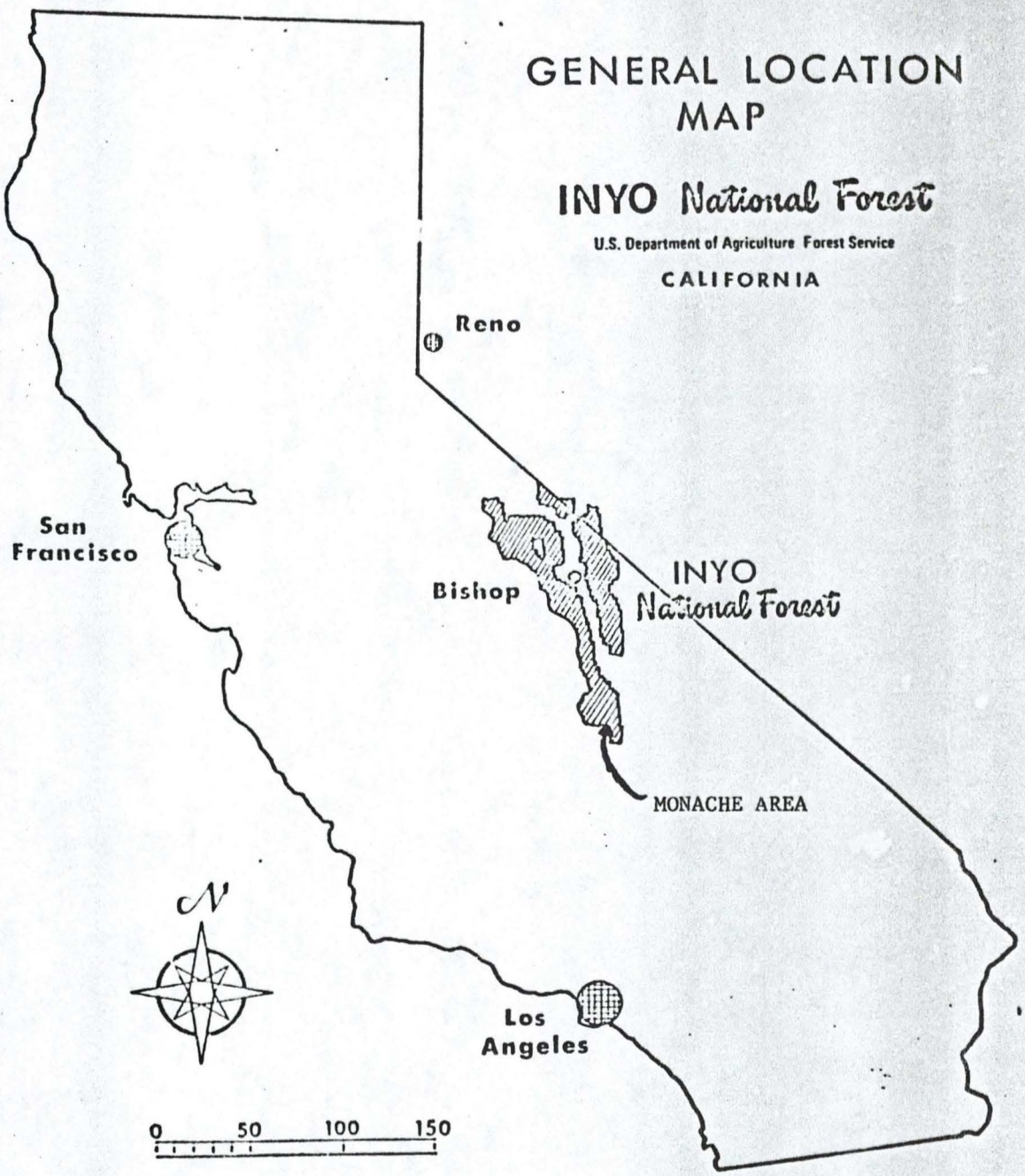
In an effort to solve these problems, the Inyo National Forest applied for a California State Off-Highway Vehicle Grant in 1985. This program channels receipts from registration of off-highway vehicles for the performance of resource protection work on existing routes and enhancement of off-highway vehicle opportunities. The Regional Office of the Forest Service, recognizing the complex issues and importance of the Monache area to OHV recreation, made this grant application first priority out of 67 proposals regionwide when applications were submitted to the State. Partial funding of this project has been granted. A copy of the grant application is in Appendix A.

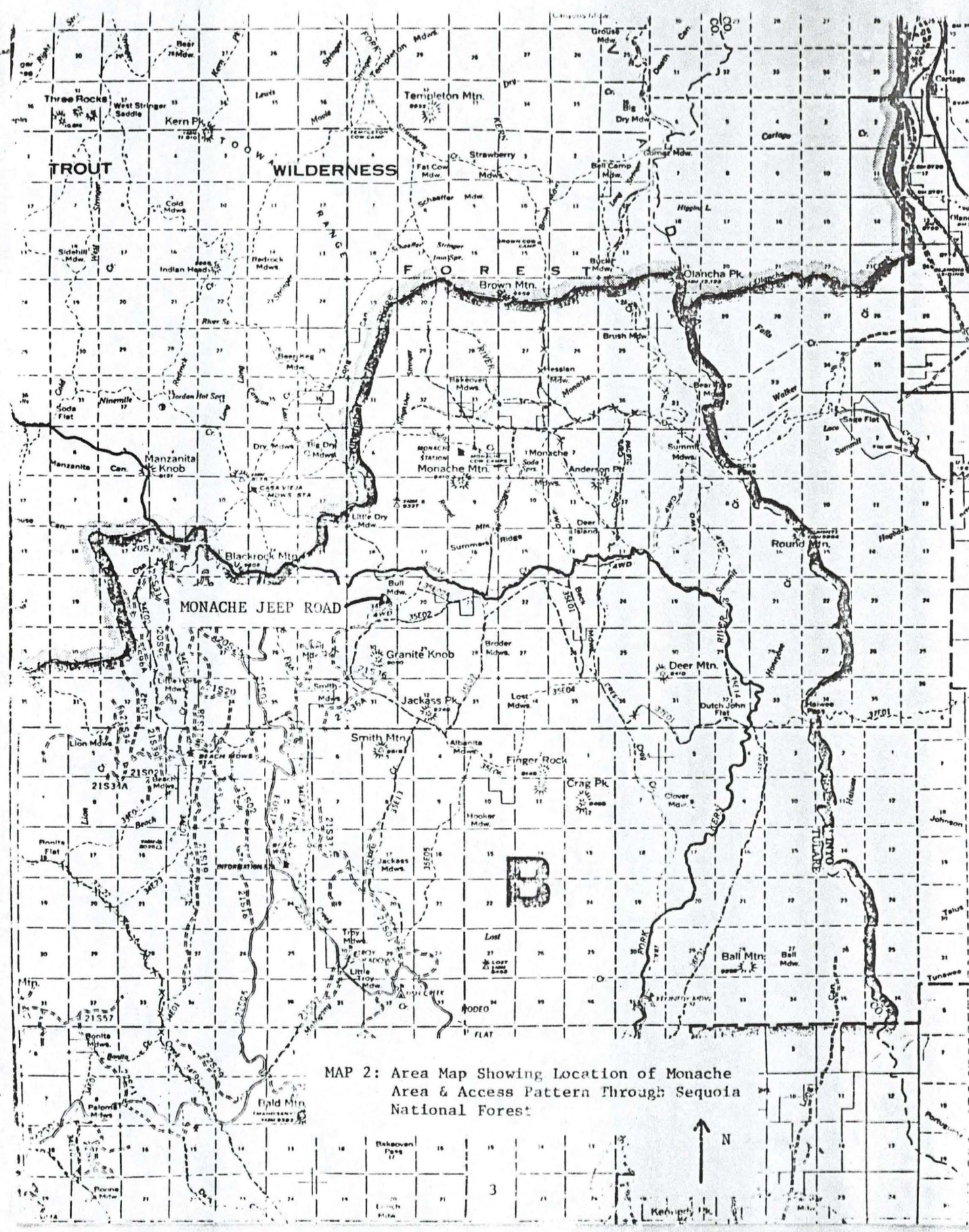
The purpose of this environmental assessment is to determine whether OHV facilities in Monache Meadow should be expanded, reduced, or remain at current levels. Additionally, the location of OHV facilities will be determined. Existing grant funding will be used to implement the selected alternative.

Area Setting

The MOHVSA is located 2 to 8 miles west of the Sierra Nevada escarpment approximately 12 miles west-southwest of the town of Olancha, California.

MAP 1


GENERAL LOCATION MAP
INYO National Forest
U.S. Department of Agriculture Forest Service
CALIFORNIA
Reno
San Francisco
Bishop
INYO National Forest
MONACHE AREA
N
Los Angeles
0 50 100 150



MAP 2: Area Map Showing Location of Monache Area & Access Pattern Through Sequoia National Forest

The topography ranges from flat to rolling with a maximum relief of 2,060 feet between the top of Brown Mountain (elevation 9,958 feet) on the north edge of the study area and the southeast edge of Monache Meadow (7,840 feet). Slope exceeds 60% only along the South Fork of the Kern River Canyon on the north end of the area.

Relevant Direction From Land and Resource Management Plan

A Draft Environmental Impact Statement (DEIS) and proposed Land and Resource Management Plan have been prepared to provide long-range management direction on the Inyo National Forest. This activity is required by the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) and the National Forest Management Act of 1976 (NFMA). The DEIS presents and analyzes six alternative plans and identifies a preferred alternative. The Proposed Plan is the preferred alternative plan described in more detail and expanded to contain integrated multiple-resource direction intended to guide management of the Forest for the next 10 to 15 years. While scheduled for implementation in 1988, the Plan represents the current relevant direction for management of the entire Inyo National Forest, including the Monache area.

The Plan contains specific management prescriptions, each designed to blend and integrate practices, activities, and services which together prescribe levels of resource management to be conducted on management areas. In Monache, there are two management prescriptions within a single management area to provide area-specific management direction. See Appendix B for complete prescriptions and management area direction.

The first prescription is Wild and Scenic Rivers. The South Fork of the Kern River is a candidate for Wild and Scenic River designation. Interim management guidelines require preservation of the existing character of this river within a linear strip averaging one-quarter mile wide on each side and paralleling the river. The portion of the river in the MOHVSA includes 8.2 miles of scenic segment and 1.0 miles of wild segment as shown on Map 3.

Plan direction for the scenic segment pertinent to OHV management includes:

1. Allow the range of recreation activities included in ROS classes primitive, semi-primitive nonmotorized, semi-primitive motorized, and roaded natural. Allow OHV use on dispersed roads or trails only.
2. Provide for recreation in a near-natural setting while allowing other compatible uses.
3. Allow OHV use at locations no closer than 100 feet from the river edge.
4. Allow limited road construction.

Plan direction for the wild segment pertinent to OHV management includes:

1. Allow the range of recreation activities included in ROS classes primitive and semi-primitive nonmotorized. Allow no OHV use.
2. Provide access by trail only and for nonmotorized uses.
3. Disallow roads within wild segments.

The second prescription is Limited Access. All acreage in the MOHVSA not within the Wild and Scenic River corridor is subject to the Limited Access Prescription. The following portions of this presecription are pertinent to OHV management:

1. Emphasis is on maintaining the limited access or "unroaded" characteristics of these lands.
2. Do not upgrade four wheel drive roads to two wheel drive roads. The Interdisciplinary Team agreed to propose a Forest Order for the Inyo and Sequoia National Forests limiting use to 4WD or motorbikes only on the access road into the area. This would be based on unacceptable resource damage currently existing due to two wheel drives attempting to access the area. This complies with direction here and in item 6 below.
3. Manage land to maintain ROS classes of primitive, semi-primitive nonmotorized, semiprimitive motorized, and roaded natural.
4. Manage recreational and scenic opportunities to maintain or enhance their values.
5. Provide for trail access consistent with management objectives for the area and ROS class applied. Allow OHV use only on designated roads and trails.
6. Develop no additional permanent, public, two wheel drive access.
7. Meet or exceed the Visual Quality Objective of Retention.

The South Sierra Management Area includes the MOHVSA. Management Area direction pertinent to OHV management includes:

1. Tier to May, 1985 Green Sticker Grant Application (contained in Appendix B) that requests:
    a. reconstruction of approximately 12 miles of 4WD and bike trails to mitigate existing damage and allow for orderly, progressive OHV travel;
    b. installation of runoff and erosion control improvements including reroutes, causeways, and culverts;
    c. construction of 2 to 4 miles of new 4WD trails to bypass and eliminate deadends of old trails at the boundary of the newly designated South Sierra Wilderness;
    d. tying to existing or proposed trails on the Sequoia National Forest where feasible;
    e. restoration of abandoned trail sections to a pre-use condition;
    f. installation of self-service information stations, and directional and regulatory signs.
    (Note: current Green Sticker funding covers portion of a through e above.)
2. Emphasize semi-primitive nonmotorized and semi-primitive motorized ROS class activities and opportunities. Develop an OHV plan to include capacity, ROS class designation, and limited overnight camping facilities to maintain a quality level of use with minimal resource damage. (Note: Development of an OHV plan should be done after Forest Plan approval. The OHV plan should tier well to this environmental analysis.)
3. Allow no activities that would preclude the candidate South Fork of the Kern River from Wild and Scenic River designation.

ISSUES, CONCERNS, AND OPPORTUNITIES

ISSUES

Public issues relating to vehicle use and facilities in Monache were identified through public involvement. Appendix C contains a letter sent to 75 interested groups and individuals seeking their comments on the proposal. Motorcycle and 4WD groups and environmental groups were included on the mailing list. The source for most of these names was the mailing list generated in 1985 for a geothermal proposal in Monache. In addition, all cattle and cabin permittees and all private landowners in the area and neighboring Long Canyon were sent letters.

There were 68 public responses which were coded into 60 types of specific comments. These were reviewed and condensed to 12 categories of public issues. For a more detailed compilation, see Appendix D.

The public issues identified are:

1. Impacts on private land and landowners, including trespass, noise, visual degradation, and loss of privacy.

Seven people (none of them landowners) raised this issue in their letters.

2. Maintenance of vehicle access to Long Canyon in OHV planning.

Four people (all of them private landowners in Long Canyon west of Monache) wrote in asking for continued vehicular access to their property inside the Golden Trout Wilderness. Three of them mentioned use of a locked gate to keep public vehicles from entering the wilderness. Additionally, a law firm representing other Long Canyon private landowners wrote in requesting continued vehicle access and suggesting a new alignment for the access road. The type of access to be permitted for these landowners is the topic of a separate environmental analysis.

3. Lack of long-term funding for patrol, law enforcement, and maintenance needs.

Ten individuals listed this as an issue. This included 1 cattle permittee shareholder. In addition, 3 conservation groups listed this issue, including Defenders of Wildlife and the Toiyabe and Kern-Kaweah Chapters of the Sierra Club.

4. Construction and use of new OHV facilities in pristine areas.

Fifteen people were against impacting new areas with roads or trails either due to preserving solitude or to maintaining the existing natural character of the entire Monache area. This included 1 landowner and 1 cattle permittee shareholder. This factor was also listed by 3 conservation groups, including 2 responses from the Toiyabe Chapter of the Sierra Club and the Kern Valley Resource Conservation District.

5. Emphasis on non-motorized activities and stabilizing recreation use levels.

Fourteen individuals listed this as an issue. This group included 1 cabin permittee and 2 cattle permittee shareholders. The Kern-Kaweah and Toiyabe Chapters of the Sierra Club also supported this issue.

6. Impacts on wildlife, especially deer herds. This includes migration routes and fawning areas.

Thirty-five individuals listed this issue. These included 1 private landowner, 3 cattle permittee shareholders, and 1 Department of Fish and Game biologist. There were also 2 responses to this issue from the Toiyabe Chapter of the Sierra Club.

7. Impacts on grazing. This issue included impaired grazing management and harassment of cattle by vehicles and noise.

Three individuals, 2 of whom are cattle permittee shareholders, listed this issue. Cattle distribution and even-grazing utilization were mentioned.

8. Impact on wilderness.

Included were vehicle trespass and noise issues. This was listed by 5 individuals, including 2 cattle permittee shareholders. Additionally, the Kern-Kaweah Chapter of the Sierra Club requested keeping OHV routes away from wilderness boundaries.

The public scoping letter mentioned the possibility of creating loop routes to solve dead-end route problems near wilderness boundaries. This approach was supported by 4 individuals, including 1 private landowner.

Five individuals requested that obliteration of vehicle routes inside wilderness areas be done. Defenders of Wildlife and the Kern-Kaweah Chapter of the Sierra Club also requested this action.

9. Repair of existing damaged areas on vehicle routes.

This was raised by twelve individuals, including 1 landowner and 1 cattle permittee shareholder. In addition, 3 conservation groups supported this issue, including Defenders of Wildlife and 2 responses from the Toiyabe Chapter of the Sierra Club.

10. Impacts on cultural resources.

This issue was listed by 3 individuals, including 1 cabin permittee and 1 cattle permittee shareholder.

11. Maintain Size of OHV system.

Five individuals were against any reduction in current mileage in the vehicle-oriented route system; they wanted to see overall route mileage

remain the same. Five other individuals supported creating new OHV routes.

12. Safety.

Twenty-three identical responses were received bringing up safety as an issue. They felt that new trails would open up new country to prime deer hunting and thereby create dangers to bike riders.

Other Public Comments

In addition to these public issues, there were route-specific comments sent in by the public, generally in reaction to routes proposed in the public scoping letter. They were either in support of, or against, specific routes. Table 1 below displays this input.

TABLE 1

Route-Specific Public Comments

Route	Number of Responses In Support	In Opposition
2H - Bakeoven Crossing Rehabilitation	4	0
3J - Summers Ridge 4WD	1	2
3K - Deer Island #1	0	3
3L - Deer Island #2	2	0
3M - Anderson Point	1	0
3O - South Fork	0	1
3P - Kingfisher	0	2
4Q - Summers Ridge to Deer Island	1	3
4R - Broder Trail N. of Snake Creek	0	1
4S - Monache Mountain	0	41
4T - Bakeoven	2	42
Other:		
a. Snake Creek - Kingfisher 4WD Road	1	0
b. Snake Creek - Kingfisher Bike Trail	2	0
c. Close all vehicle routes E. of S. Fork of the Kern River	11	0

Other Public Comments Beyond Scope of this Analysis

Other public comments were received but were considered to be outside the scope of this environmental analysis. They are:

1. Re-opening of South Fork 4WD Road to the Schaeffer Fish Barrier.

Discussion of this request by the Interdisciplinary (ID) Team led to the conclusion that management should continue to keep the road closed to the public at the point of blockage. It is an ideal location to terminate travel to avoid the possibility of fording the river and creating new pieces of road with new impacts in a changing river floodplain. Closure offers additional protection against reintroduction of brown trout into the golden trout fishery above this important barrier.

2. Moving the southwestern terminus of Bakeoven Bike Trail further west to increase the buffer to private land.

ID Team discussion led to dropping this suggestion after noting that the on-the-ground buffer was adequate and had increased somewhat since the public scoping map was made.

3. The American Motorcycle Association-Land Use Committee-made several suggestions:

A. Approval of conceptual plans by a qualified OHV specialist. It was felt that inclusion of Mike Mendoza of the neighboring Cannell Meadow Ranger District, Sequoia National Forest, as an OHV specialist on the ID Team was adequate in this process.

B. Form an ad hoc OHV advisory committee to assure efficient use of limited funds. Again, use of Mike Mendoza was deemed satisfactory and more streamlined. He has had the experience of directing a number of Green Sticker projects through all stages of planning, development, and implementation in the field.

C. Refer to user needs analysis done by ERA for EDAW in the Statewide Trail Plan for ideal trail concept. This analysis was a proposed conceptual plan and was not adopted or endorsed by the Off-Highway Motor Vehicle Recreation Commission.

D. Recommendation of a minimum of 10 minutes (preferably 20 minutes) travel time between intersections. This guideline is not applicable in a small area such as Monache.

E. Consider both the needs of campers based in Monache and those coming into the area via trails. This issue is outside the scope of this EA since it relates to camping. It will be addressed in the upcoming OHV Plan for Monache.

CONCERNS

Management concerns in the Monache area have been identified. They are:

1. Maintenance of high wildlife habitat effectiveness in key fawning areas, holding areas, and key migration routes. Also of concern is coordination with proposed Duck Stamp projects.

2. Impacts on sensitive species of plants and animals.

3. Increased vehicle harassment of wildlife and domestic stock.

4. Impacts on archaeological sites from new routes and existing routes.

5. Impacts of new routes in currently unroaded areas.

6. Visual impacts of new routes.

7. Change in type of recreation experience due to increases in noise, use, user conflicts, and system mileage as well as changes in the type of use.

8. Increase in vehicle trespass in wilderness and use off established routes.

9. Increased sedimentation from stream crossings and increased erosion problems from new roads and trails.

10. Placement of new routes away from meadows, riparian areas, and archaeological sites.

11. Coordination with Wild and Scenic River proposal for South Fork of the Kern River.

OPPORTUNITIES

There are opportunities in the Monache area to improve environmental and recreational values there. These opportunities are:

1. Loop routes will lower wilderness trespass, tend to confine OHV use to established routes, and improve the OHV experience for users.

2. Increased system mileage will increase OHV opportunities.

3. Repair or obliteration of existing damaged areas will help restore riparian areas.

4. Existing routes can be rerouted to avoid wildlife problem areas.

5. Unofficial or illegal tracks near legal routes can be obliterated.

6. Archaeological sites disturbed by existing routes could be mitigated or rerouted.

7. A handout and map showing legal routes could be created for public use.

8. Coordinated transportation planning with the Sequoia National Forest is possible. New routes could help accommodate the high demand for OHV facilities on the Sequoia National Forest.

II. ALTERNATIVES

Alternatives Analyzed In Detail

The five alternatives presented below have been developed to represent a range of off-highway vehicle routes and opportunities in the Monache Meadow area. They were developed from the issues, concerns, and opportunities presented in the previous section. Alternatives 2 through 5 have been subdivided into sub-parts. Each sub-part has been assigned a unique letter designation to avoid confusion in referring to these segments. Subsequent sections of this paper will discuss the affected environment and environmental consequences of each sub-part (as appropriate) as well as the effects of each entire alternative.

The alternatives are:

1. Alternative 1 - No action
2. Alternative 2 - Reconstruction of existing routes
3. Alternative 3 - Construction of new four wheel drive roads
4. Alternative 4 - Construction of new motorbike trails
5. Alternative 5 - Preferred alternative

These alternatives are discussed in detail below.

Alternative 1 - No Action: This alternative would retain the existing system of vehicle routes in their current condition. On-going, routine operation and maintenance activities would continue. Custodial maintenance of existing routes would occur. Major reconstruction projects would not be initiated. A long-term downward trend in route system condition would be predicted. Map 3 displays these segments.

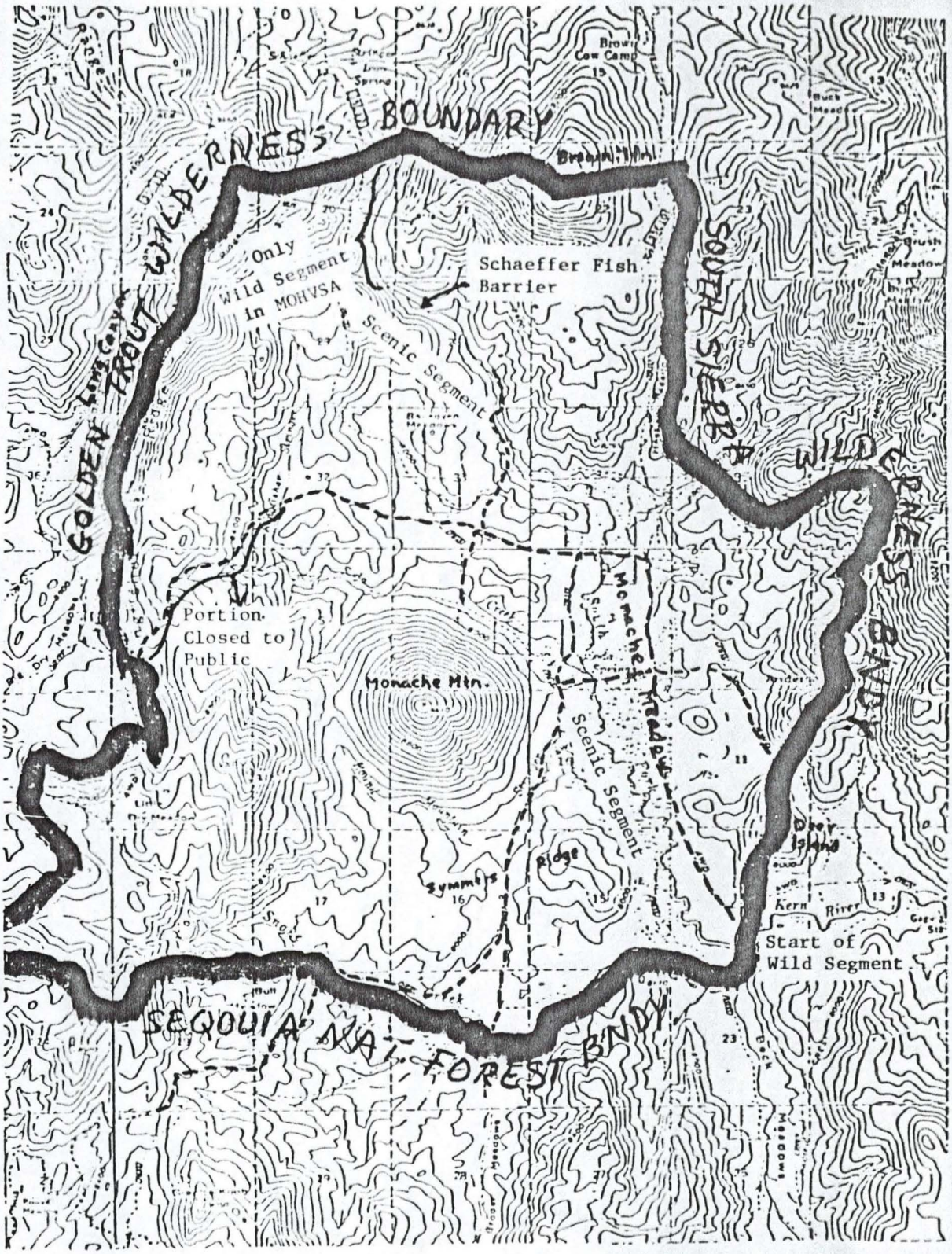
Alternative 2 - Reconstruction of Existing Routes: This alternative would allow reconstruction of portions of the existing four wheel drive roads and motorbike trails to mitigate existing resource damage and allow for orderly off-highway vehicle travel. Activities would include making existing routes through wet meadow areas passable, constructing minor re-routes to avoid sensitive areas, and obliterating the old routes following the rerouting activity.

This alternative is comprised of 9 route segments needing reconstruction. Map 4 displays these segments. They are:

A. Snake Creek - Summers Ridge.

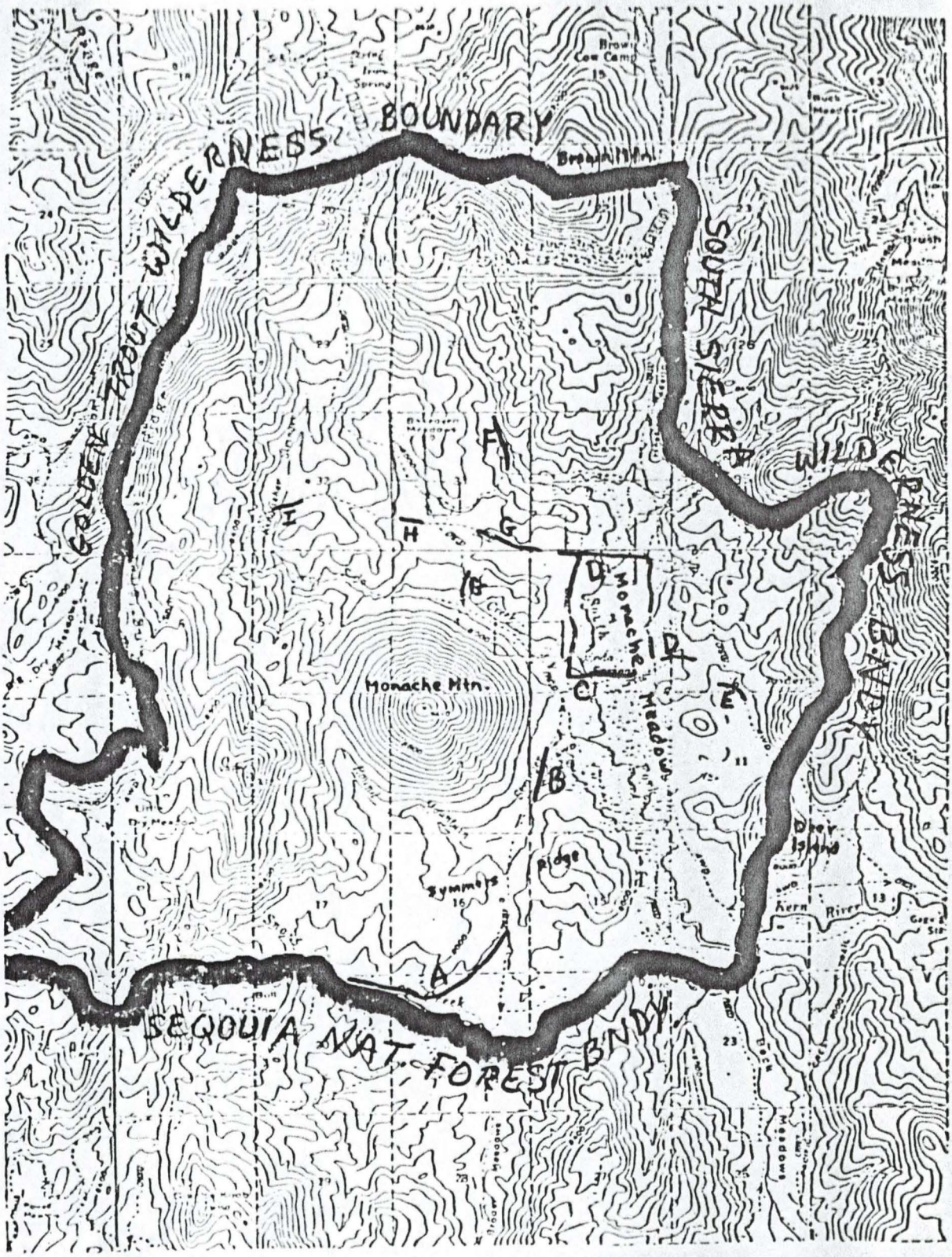
This route segment, approximately 2 miles long, is typified by deep rutting in dry and wet meadow areas. The road up Summers Ridge is gullied from vehicle use and lack of erosion control structures. The western terminus involves a ford at Snake Creek that is in poor condition. See Photo 1.

Reconstruction would include making soft spots passable and filling of ruts in the meadow areas as well as building water bars and check dams in ditches along the segment climbing up Summers Ridge. The ford would be reconstructed to make it



MAP 3: Alternative 1
Existing OHV Roads & Trails

N



MAP 4: Alternative 2
Reconstruction of Existing Routes

N

passable regardless of intermittent flows of springs in the area.

B. Round Mountain Stringer Crossing

This stretch of 4WD road is approximately .4 miles long. The road crosses a very wet meadow area. Past efforts at making this area passable have not been very successful. Soils are deep and saturated in the area. Vehicle users are creating multiple routes in this meadow area in an attempt to avoid getting stuck.

Under this alternative, reconstruction would involve hardening of this segment to make it passable while allowing flow-through of abundant groundwater in this nearly flat setting.

C. Soda Springs Complex

This sub-part contains several routes intersecting in the Soda Springs area, totalling approximately 1 mile long. One route crosses the South Fork of the Kern River while the main 4WD road crosses Soda Creek in the Soda Springs area. Multiple crossings are a problem at each location. Both of these crossings tend to become unusable by vehicles in the spring when high runoff changes the stream channel profiles at these 2 fords. See Photo 2.

Reconstruction efforts would define a single ford at each crossing and would harden the ford approaches to preserve a driveable route profile.

D. Monache Meadow

Existing routes in this sub-part are contained in Monache Meadow and total approximately 5 miles long. They are typified by single, sometimes multiple, routes in the sandy flood plain of the South Fork Kern River. They are often deeply rutted. As the river channel changes, roads closest to the river are undermined and caved in. A poorly defined crossing of the river has created multiple fords and subsequent resource damage. Roads frequently consist of linked vertical curves (deep washboards) that create an undulating effect and require low speed. See Photos 3 and 4.

Reconstruction would include defining ford locations, closing and scarifying old routes partially undermined by the river, and defining and hardening a single route.

E. Anderson Point

This .2 mile segment contains a very muddy section which people either get stuck in or they detour around, creating new routes in this meadow area. Additionally, other portions have been poorly located in the meadow, causing channels up to three feet

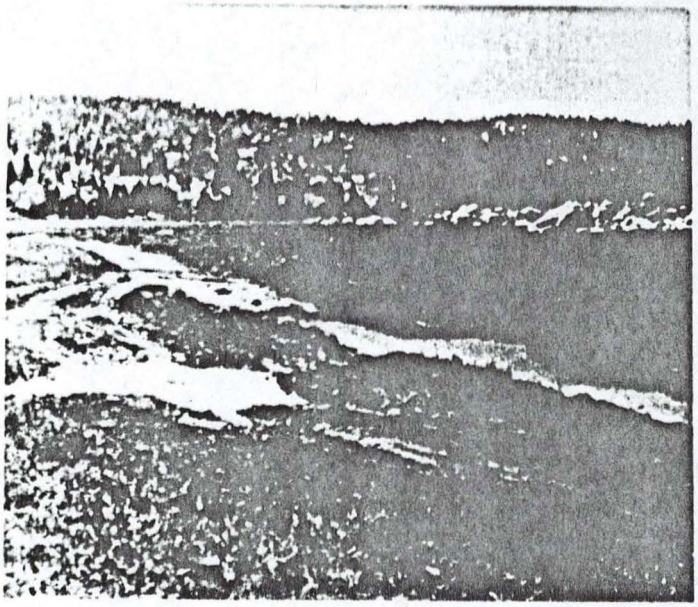


Photo 1. 4WD Road (A) between Snake Creek ford and junction with Broder Bike Trail showing multiple routes at bog hole.

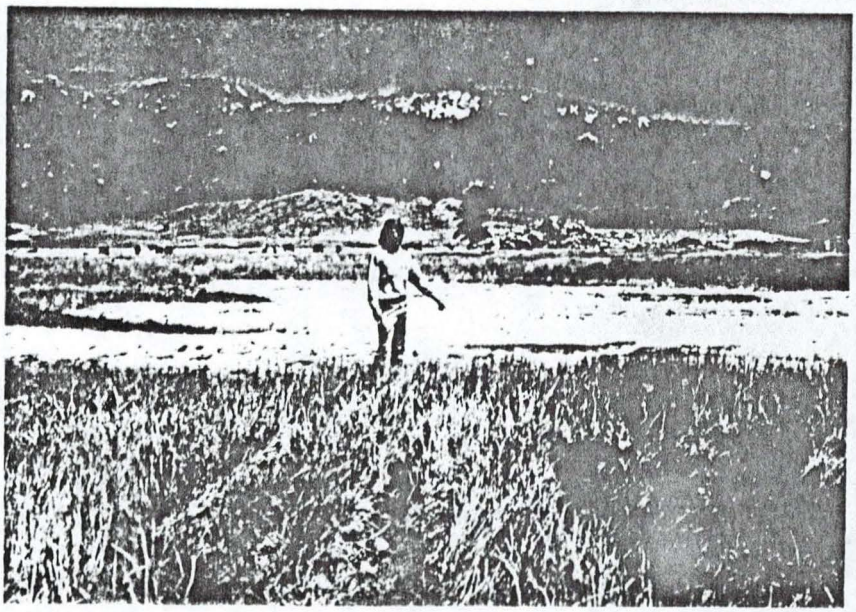


Photo 2. Vehicle tracks through Soda Springs (C) (off road).

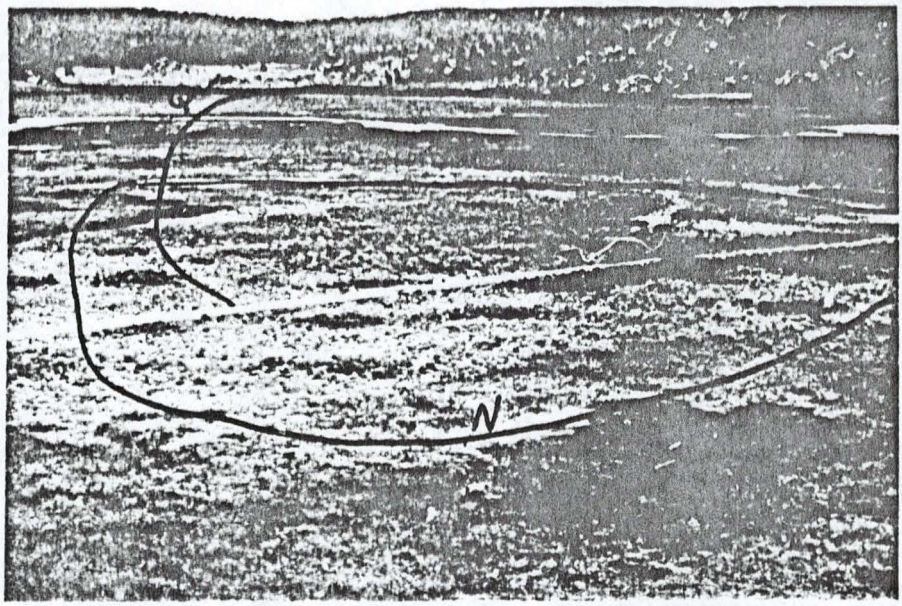


Photo 3. 4WD Road (D) east of South Fork of Kern R. Shot from southern spur of Deer Island. Shows proposed 4WD (N) and bike trail (Q).

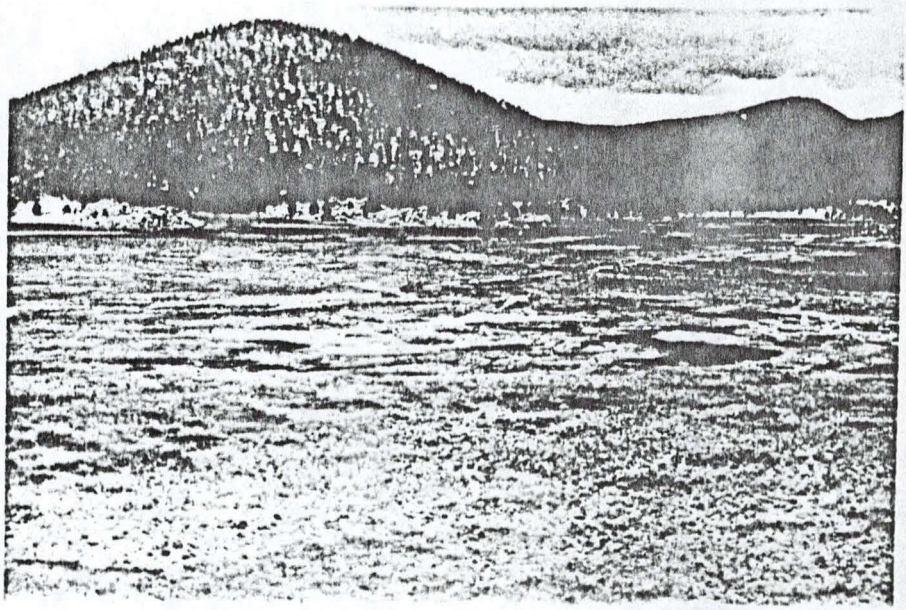


Photo 4. View to north of Photo 3 (D). Monache Mtn.& Mdw. shown. Kingfisher Ridge (wilderness boundary) in right background.

deep. New routes are then started next to these channels, and the cycle of lateral displacement of the route is started over again.

Reconstruction would include selecting the best location for a route through this area and defining it through hardening. Old routes would be brought up to grade and encouraged to revegetate.

F. South Fork Meadow

This segment is approximately .5 miles long. It traverses a meadow adjacent to the South Fork of the Kern River in the northern portion of the MOHVSA. It contains deep, undriveable ruts paralleled by driveable ruts that are becoming deeper with use. The route becomes muddy during wet times of the year. See Photos 5 and 6.

Reconstruction would involve defining and hardening the selected route. Other old routes would be brought to grade and encouraged to revegetate.

G. Bakeoven East

This 1.3-mile stretch contains a meadow section with old, deeply rutted routes. There are also several spots where the route in use crosses the old route. Another problem is an unusual, large sand dune crossed by the main road for approximately .3 miles. OHV's tend to wander off the established route, creating visual, vegetative, and erosion impacts. Another stretch of road that provides access to a Forest Service administrative cabin and a cattle permittee cabin crosses a wet meadow at Soda Creek. This cabin is used as a base for Forest Service personnel working as OHV rangers. See Photo 7.

Reconstruction would involve bringing the old routes up to grade, encouraging them to revegetate, and hardening the newer route to avoid similar problems in the future. The road through the dune needs a creative solution to address the OHV problem there. The road to the cabin would need the addition of rock to bring it up to grade and make it more passable.

H. Bakeoven Crossing

This section involves multiple crossings of a small stream and adjacent meadow areas. The damaged area is approximately .3 miles long. An old log causeway for vehicles has fallen into disrepair and no longer spans the entire marshy area containing the slow stream. As a result, multiple crossings have been developed through use. All of these crossings are negatively impacting this riparian zone through vegetative trampling, soil loss, and visual degradation. Early each year when soils are wettest, all of these crossings are difficult to drive. They become only slightly better as their approaches dry out. An

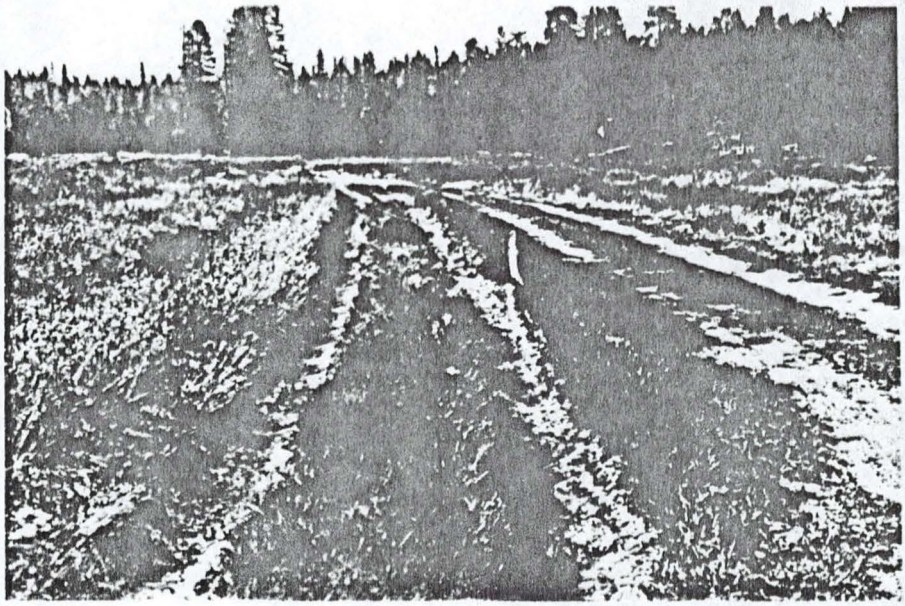


Photo 5. 4WD road in South Fork Meadow (F) showing multiple ruts.

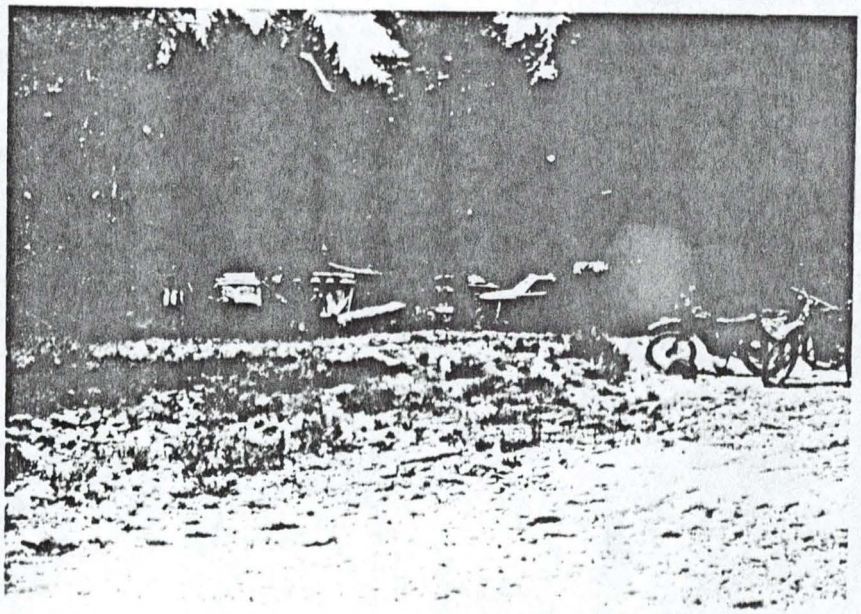


Photo 6. Campers at north end of South Fork Meadow (F) at ford. Information board at right.

additional impact is the meadow west of the crossing which is deeply rutted.

Reconstruction would involve selection of a single crossing that would be hardened using a flow-through causeway or gabion system. Existing crossings would be obliterated and encouraged to revegetate. The old log causeway would be removed. It would also involve bringing the meadow route up to grade and hardening it.

I. Kingfisher Stringer

This segment, approximately .2 miles long, contains deep ruts created through a lack of route hardening in the past. The ruts occur in a meadow bordering a small creek. The existing route parallels the undriveable ruts, creating a multiple route effect and degrading visual quality. The approaches to the stream ford are steep and impact the riparian vegetation. See Photos 8 and 9.

Reconstruction would involve bringing old ruts up to grade and encouraging them to revegetate. Additionally, the ford approaches would be hardened to handle vehicle traffic.

Alternative 3 - Construction of New Four Wheel Drive Roads: This alternative would allow construction of new four wheel drive roads. The purpose of this construction would either be 1) to create loops to solve problems of dead-end roads at wilderness boundaries; or 2) to avoid wet meadows where existing routes are causing unacceptable resource damage.

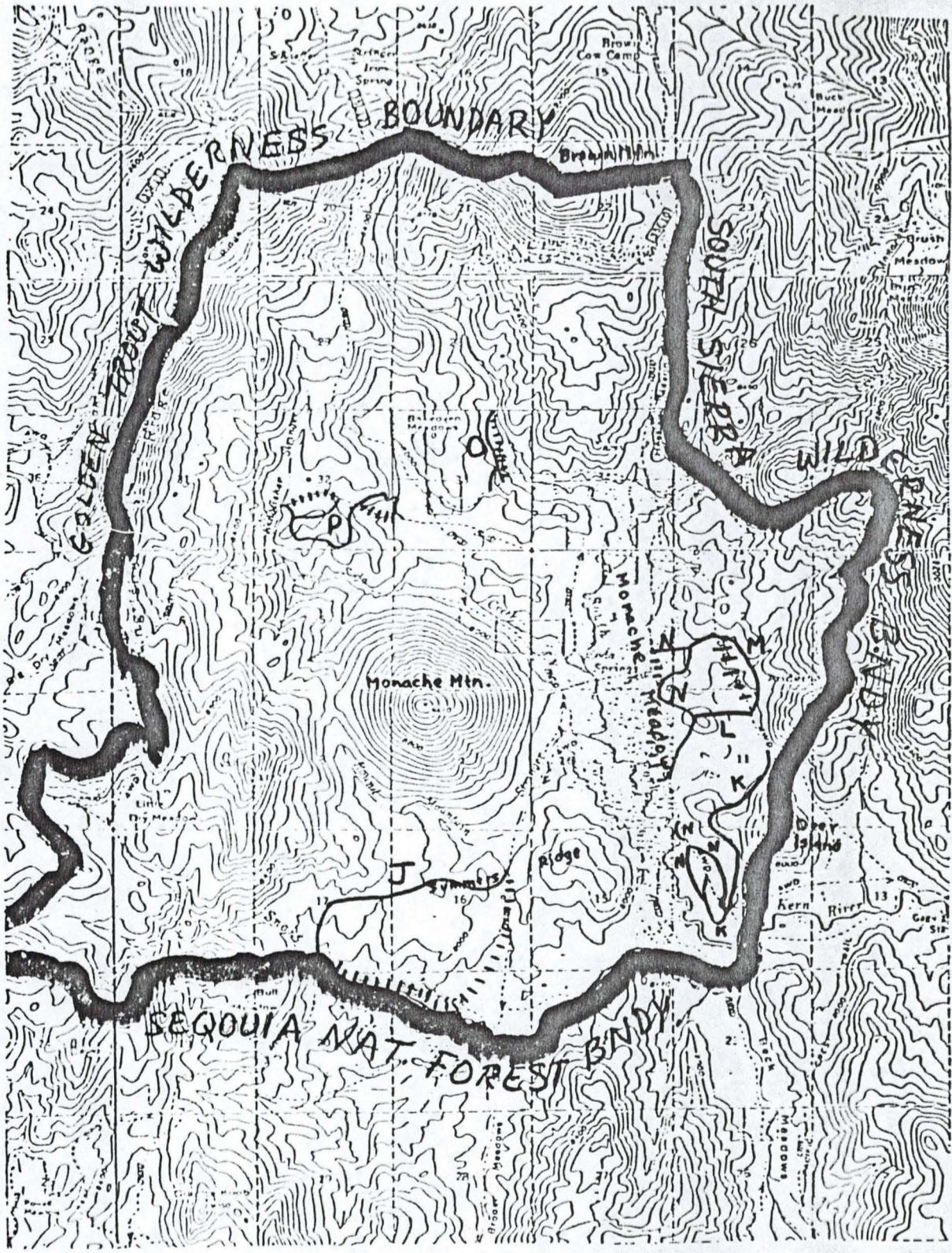
This alternative includes 7 route segments proposed for new construction. Map 5 displays these segments. They are:

J. Summers Ridge

This segment is approximately 2 miles long and is being proposed to replace the existing main access road which is causing unacceptable damage to the Snake Creek Meadow and to archaeological sites. These impacts were discussed in sub-part A. If selected, this road would be constructed on high ground away from this meadow. The western terminus would be the Snake Creek ford. The eastern terminus would be just north of the point where the existing route crosses over Summers Ridge. The existing access road would be obliterated between these two points after being brought up to grade. See Photo 10.

K. Deer Island #1

This segment is approximately 2.2 miles long. It is designed to create a loop by connecting two existing roads dead-ended at the new South Sierra Wilderness boundary. The underlying reason is to eliminate vehicle trespass in the wilderness. Each end of this segment intersects the existing roads close enough to the wilderness boundary for boundary signs to be readable. The



MAP 5: Alternative 3
Construction of New 4WD Roads
Also shows obliteration of old routes

N

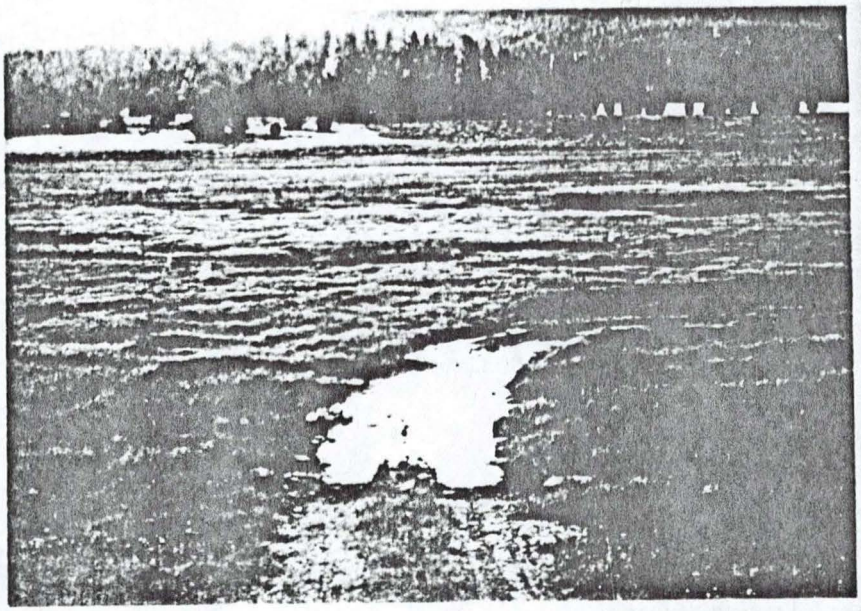


Photo 7. South end of Soda Creek crossing (G) to Forest Service administrative cabin. Note sand dune on upper part of photo.

Photo 8. 4WD road at Kingfisher Stringer crossing (I). This is point of closure to public use, with private landowners from Long Canyon allowed beyond.

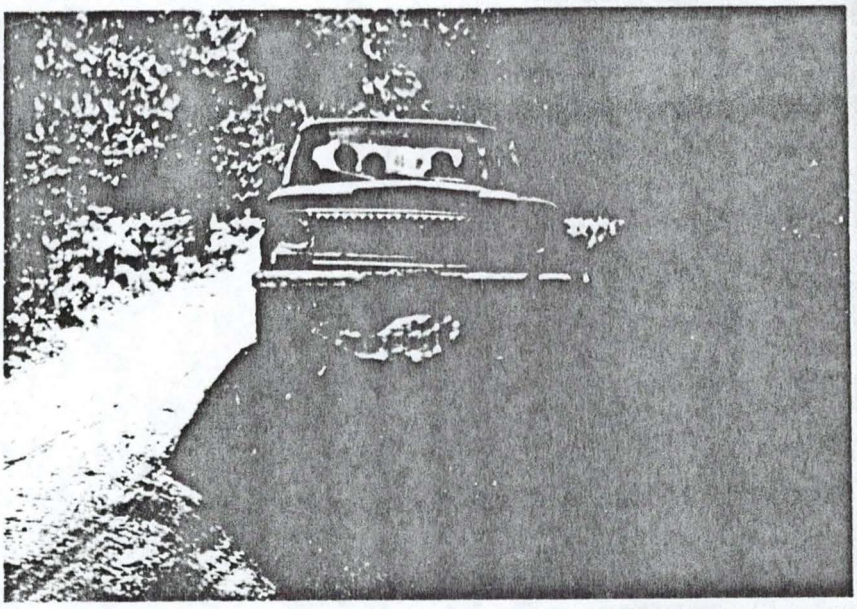


Photo 9. Deep rutting in 4WD road in Kingfisher Stringer (I).

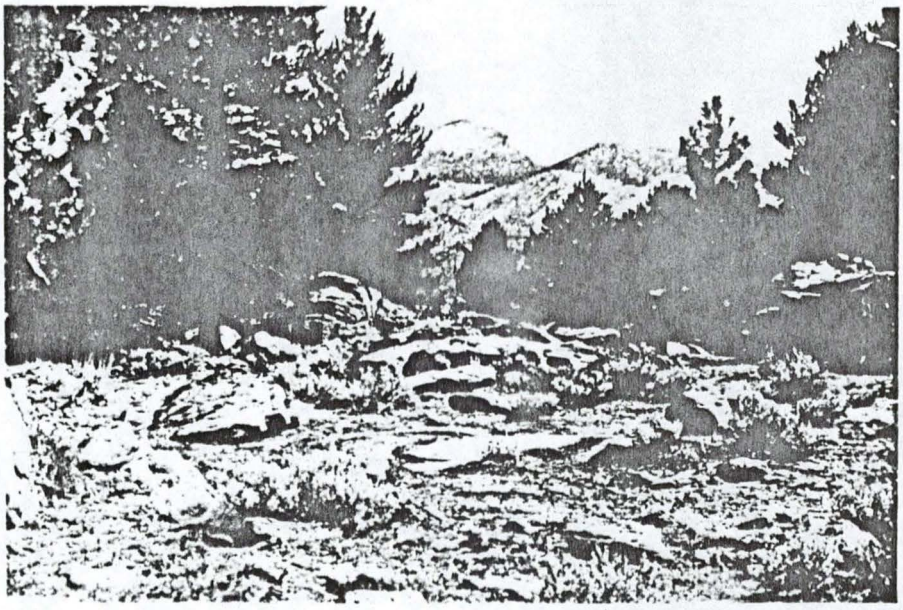


Photo 10. High point on proposed Summers Ridge 4WD Road (J). Looking northeast at Olancha Peak. All land visible below peak is in wilderness.

proposed route climbs through a saddle on the western portion of Deer Island. See Photos 11 and 12.

At the southern terminus, the proposed route crosses the existing road and utilizes a stretch of old road before turning back in a northerly direction to intersect the existing road.

L. Deer Island #2

This segment is approximately .8 miles long. It is designed to create a loop similar to sub-part K above for the same reasons. Additionally, it is planned to avoid being near a future waterfowl habitat enhancement project at the northwestern base of Deer Island. See Photos 13 and 14.

M. Anderson Point

This segment is approximately 1.4 miles long and is proposed as a totally new alignment to avoid the meadow areas impacted by the existing road. These problems were previously mentioned in sub-part E. If selected, this segment would be constructed on high ground away from the wet meadow areas. Both ends of the proposed route would intersect the existing route beyond the meadow damage areas. The existing segment would then be obliterated. See Photo 14.

N. Monache Meadow

In this proposal, 3 new pieces of road would be built east of the river to move the existing road out of rutted meadow areas and onto higher ground. These stretches are an estimated 1.6, .3 and 1.0 miles long each, for a total estimated length of 2.9 miles. The existing segments would be brought up to grade and encouraged to revegetate. See Photo 3.

O. South Fork

This segment would be approximately 1 mile long. It would replace the muddy stretch of road described in sub-part F. This segment would stay on high ground west of the meadow. A small loop would be added at the southern end. The existing road would be brought up to grade and encouraged to revegetate. See Photo 15.

P. Kingfisher

This segment would be approximately 1.8 miles long. Its eastern terminus would be just west of the Bakeoven Crossing described in sub-part H. It bypasses a badly rutted stretch of existing road west of this crossing. The segment generally forms a loop in order to solve the dead-end situation at Kingfisher Stringer. A Forest Order currently prohibits unauthorized vehicle use between Kingfisher Stringer and the Golden Trout Wilderness boundary. This proposed loop would keep traffic on

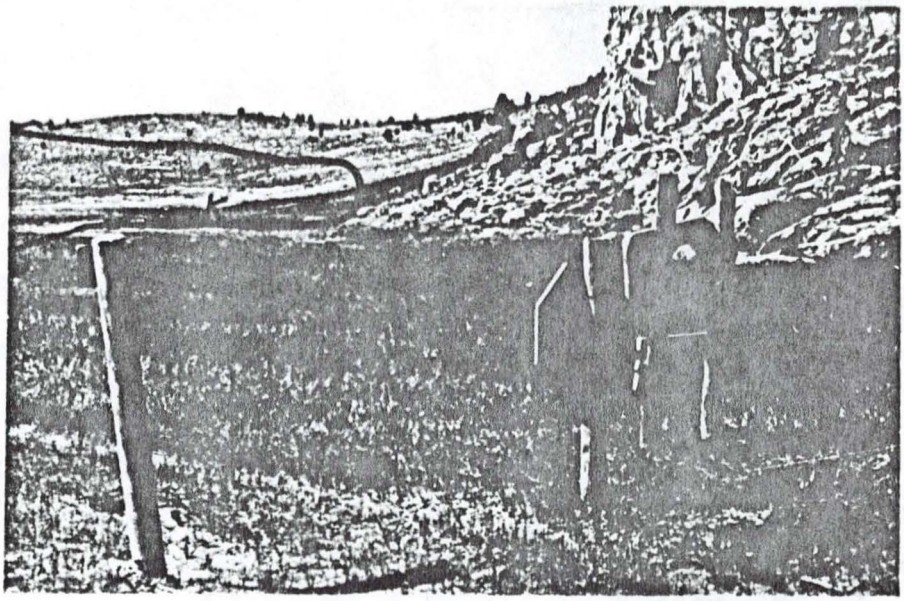


Photo 11. Proposed 4WD road (K) looking north at saddle area on west side of Deer Island. Wilderness boundary in foreground on existing road (D).

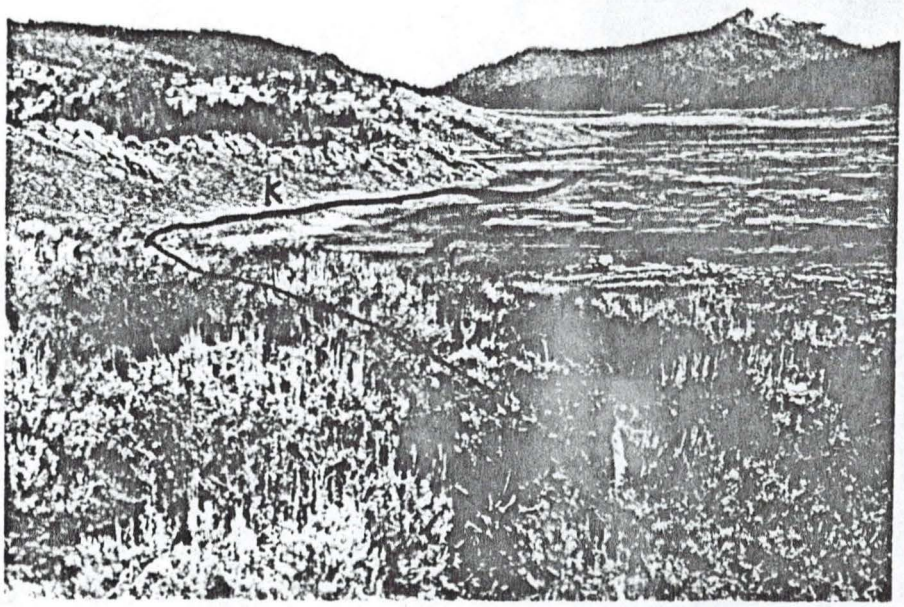


Photo 12. Looking south from saddle on west side of Deer Island at proposed 4WD road (K). Sequoia NF land in background, including Finger Rock and Crag Rock (in wilderness).

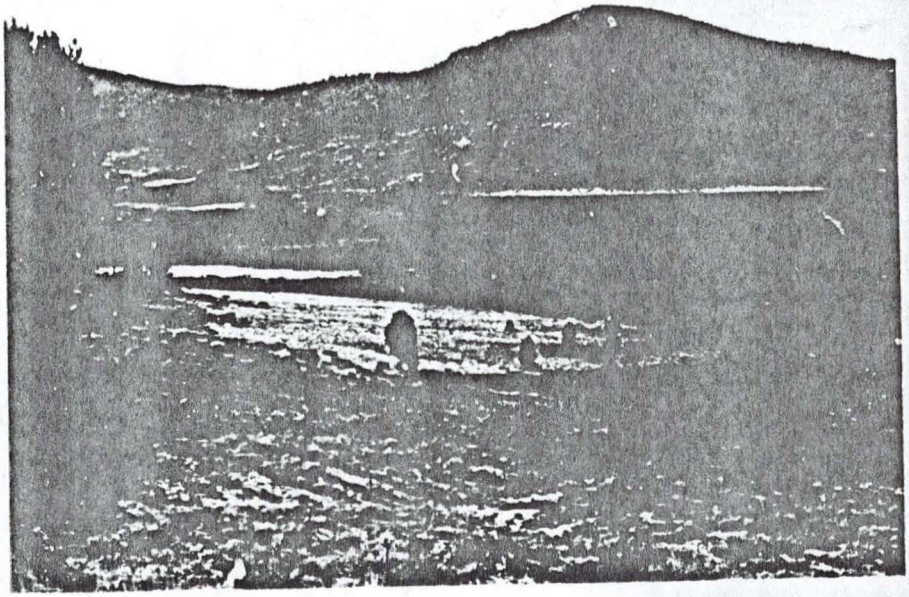


Photo 13. Looking northwest just north of Deer Island saddle on K. Wetlands is area of Duck Stamp project. Brown Mtn. (on wilderness bndy.) in background. Field surveys will determine location of L relative to middle-ground hill.

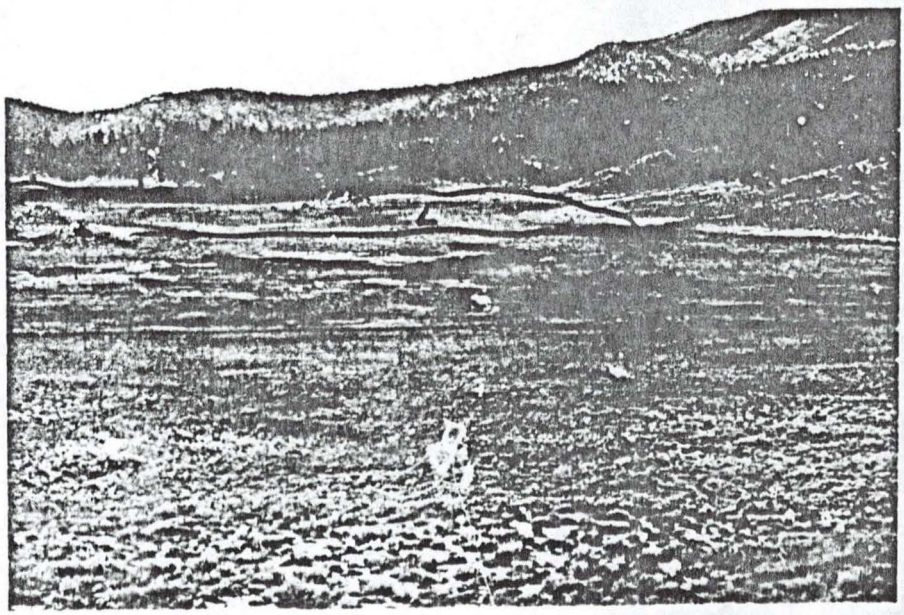


Photo 14. Looking northeast just north of Deer Island saddle on K. Shows L and M.

the east side of the creek crossing in Kingfisher Stringer. It stays on high ground to avoid meadow areas. Allowance is made for the possibility of authorized vehicle access to private land inholdings within the Golden Trout Wilderness west of Kingfisher Ridge. Such authorization for access is being studied in a separate report.

The existing public route would be brought up to grade and encouraged to revegetate.

Alternative 4 - Construction of New Motorbike Trails: This alternative would allow construction of new motorbike trails. The purpose of this construction would either be: 1) to create loops to solve problems of dead-end trails at wilderness boundaries; or 2) to create additional motorbike recreational opportunities.

Existing use of the area by all-terrain vehicles (ATV's) is extremely low. A new R5 OHV policy permits OHV's and unlicensed drivers to operate on maintenance level 2 roads unless closed to such use by a Forest Order. See Appendix E. This would allow ATV use on the existing and proposed 4WD roads. Due to this policy and light ATV usage in the area, trails for ATV's were not planned in this project. The small size of the MOHVSA does not lend itself to route planning for a type of vehicle that rarely utilizes the area. The neighboring Sequoia National Forest has ATV trails available.

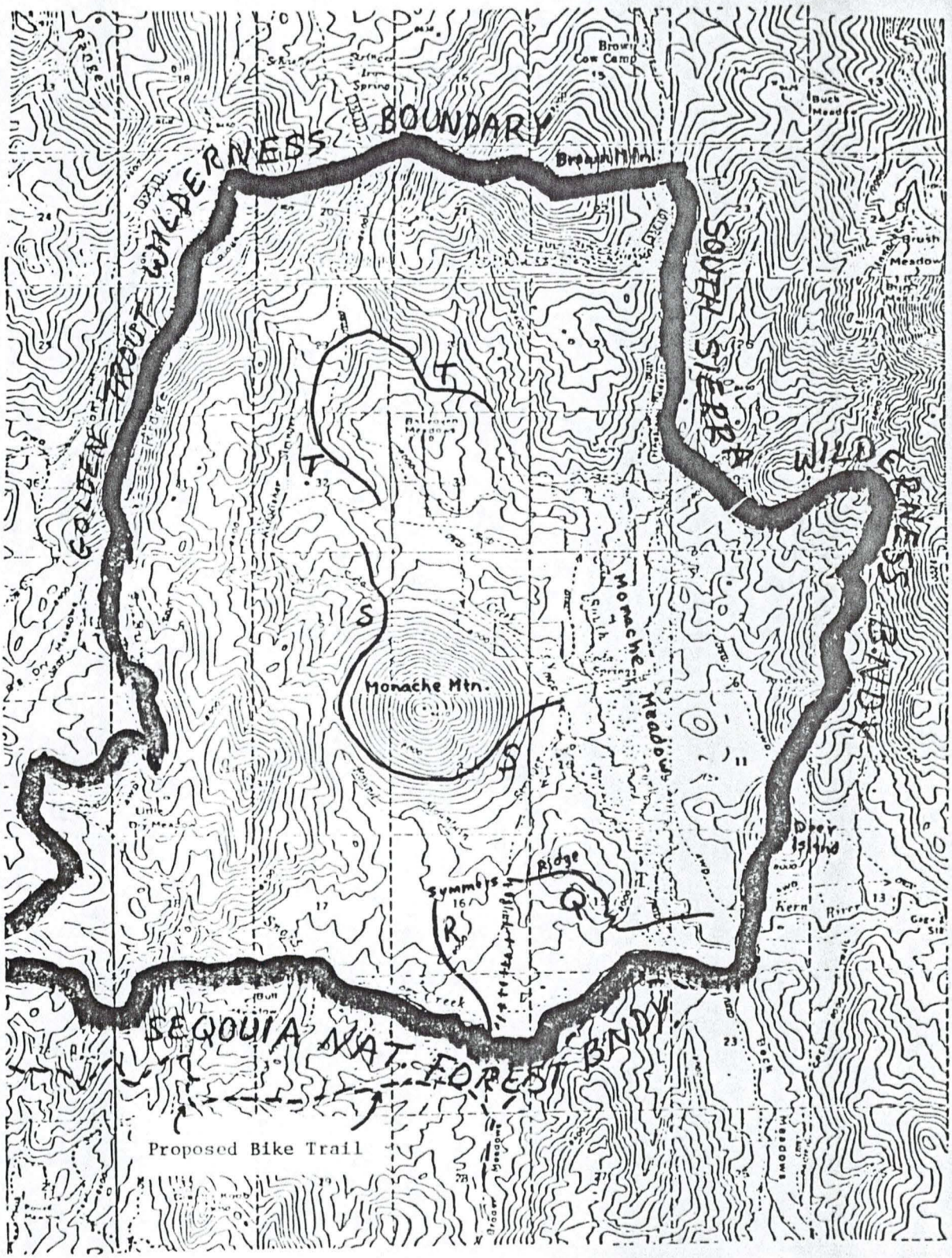
Usage of ATV's in the area is not fully compatible with full-size vehicles for user conflict and safety reasons. However, due to steep terrain involved in some proposed routes and the light usage by ATV's, their use of existing and proposed 4WD roads was considered a viable solution.

Although the popularity of ATV's is increasing, there are basic rider safety concerns emerging with this type of vehicle that might reduce their future popularity. Projections of future demands for ATV routes or other OHV routes are beyond the scope of this paper, but are appropriate items to be addressed in the future Monache OHV Plan.

Alternative 4 includes 4 trails proposed for new construction. Map 6 displays those routes. They are:

Q. Summers Ridge to Deer Island

This trail is approximately 2.4 miles long and is being proposed to create a connecting trail between the road on Summers Ridge and the road southwest of Deer Island. If selected, this trail would be built high up on Summers Ridge. The western terminus would be at the main access road where sub-part J intersects it. The eastern end would switchback off the ridge, cross the Snake Creek meadow in a dry sagebrush area, and then cross the South Fork of the Kern River via a porous, gabion-type structure. It would end at its intersection with the road near Deer Island. See Photos 4 and 16.



MAP 6: Alternative 4
Construction of New Motorbike Trails

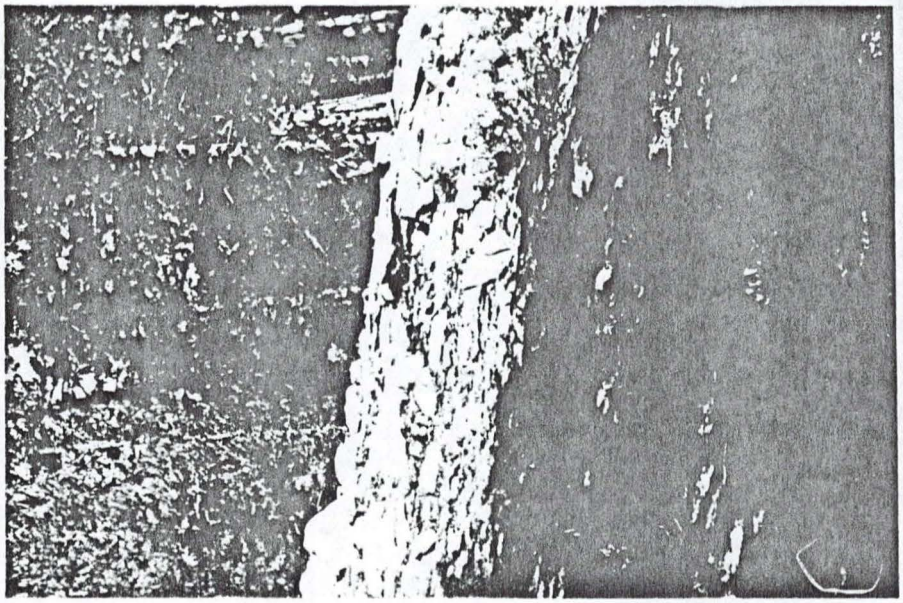


Photo 15. Proposed 4WD road (0) through rock slab area.

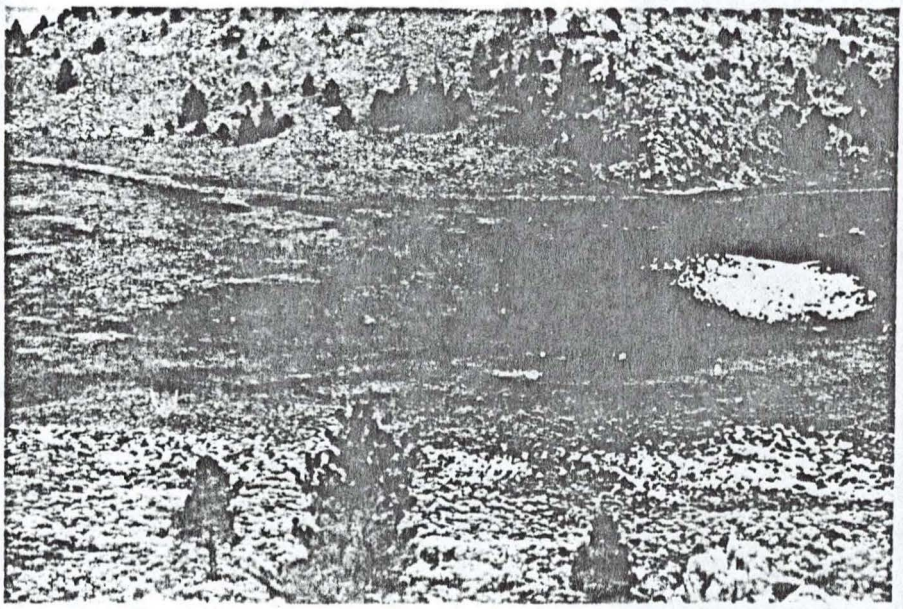


Photo 16. Area of proposed Duck Stamp project along Snake Creek being avoided by Q. Sequoia NF in background.

R. Broder Trail North of Snake Creek

This trail is approximately 1.3 miles long. This trail would be built as an additional bike opportunity for accessing the Monache area. The existing 4WD road from the Sequoia National Forest to Summers Ridge allows access to the same endpoint. Also, the Sequoia National Forest is now planning to build a major loop bike trail from just south of the Broder Trail Crossing of Snake Creek to the west toward Blackrock Trailhead as shown on Map 6.

Currently, there is a minimal trail in this area. From Snake Creek (the boundary with the Sequoia National Forest) to its terminus with the existing access road, the trail is approximately .8 miles long. An additional .4 miles of road exists to the north between this junction and the intersection with proposed routes J and Q. This bike trail involves numerous parallel ruts in meadow areas north of Snake Creek crossing. Part of this segment involves a motorbike crossing of Snake Creek in a marshy area. Current use is light due to deep water and reeds. Users tend to fan out and try new crossings, hoping to find a shallower crossing. Riparian and visual impacts are the result.

Construction would include defining a single crossing with a gabion structure that allows water to flow through. Other existing crossings would quickly return to a natural state through non-use. Construction would also involve building a new bike trail to the northwest of the existing trail to avoid impacting archaeological and meadow resources. This would also be necessary to be in compliance with Cultural Resources Standards and Guidelines in the draft Forest Plan. The existing route would be obliterated and encouraged to revegetate. This segment is on a different alignment than that originally field checked. If selected, this route alignment would need to be field checked for resource impacts before final approval.

S. Monache Mountain

This trail is approximately 3.5 miles long. Its purpose is to provide additional OHV opportunities. The eastern terminus is near the dispersed camping area below the east flank of Monache Mountain. The trail then climbs about 400 vertical feet and continues circling the south and west sides of Monache Mountain on a fairly level contour. On the northwest side of the mountain, the trail drops down and crosses Soda Creek. It then climbs again to its terminus at the junction with sub-part P. If sub-part P were not selected for construction, this bike trail would be about .3 miles longer to the point where it intersects he existing access road. See Photos 17 and 18.

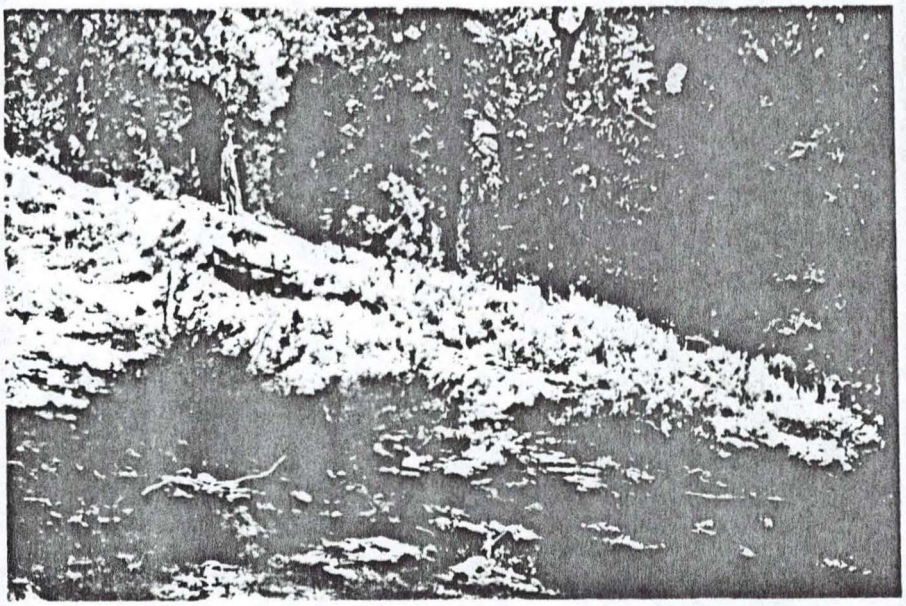


Photo 17. Typical sidehill and vegetation along proposed Monache Bike Trail (S).

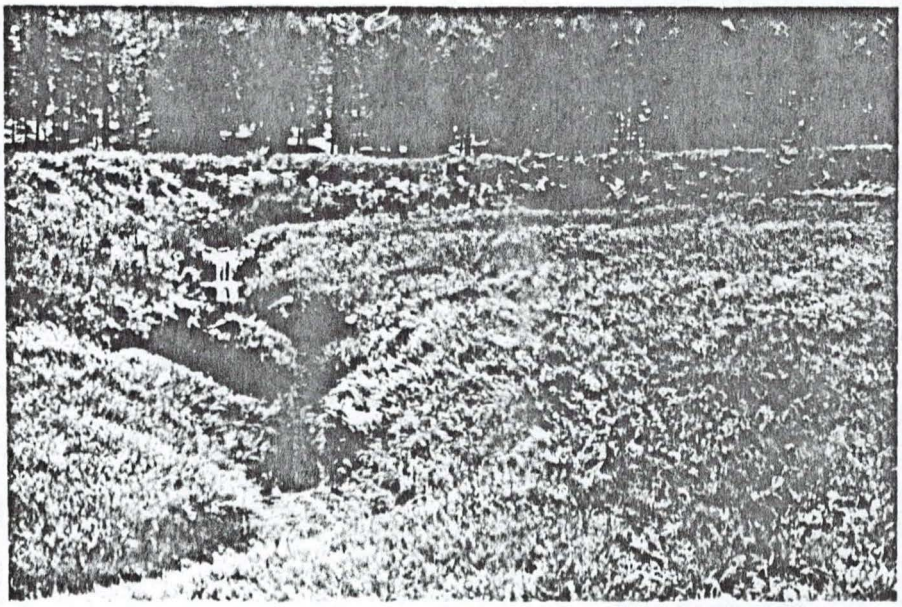


Photo 18. Location where proposed Monache Bike Trail (S) would cross Soda Creek.

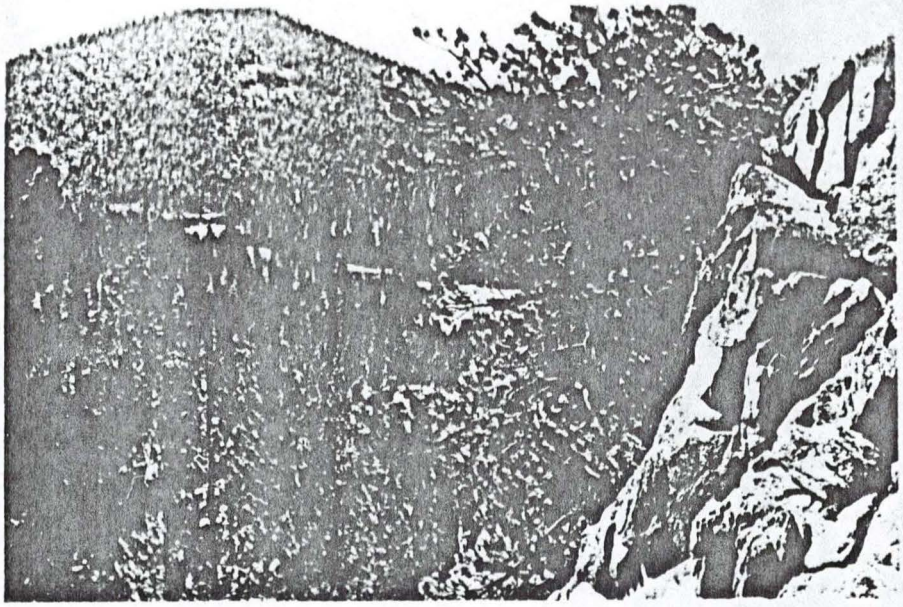


Photo 19. Looking south from high point of proposed Bakeoven Bike Trail (T). View of Monache Mtn., Bakeoven Meadow.

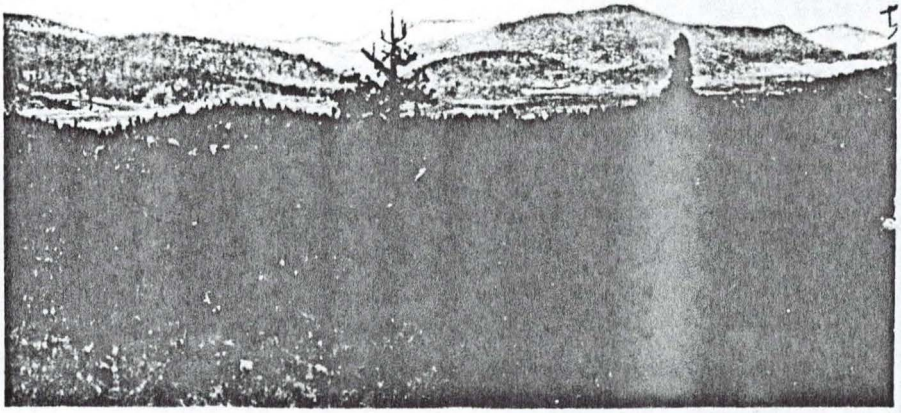
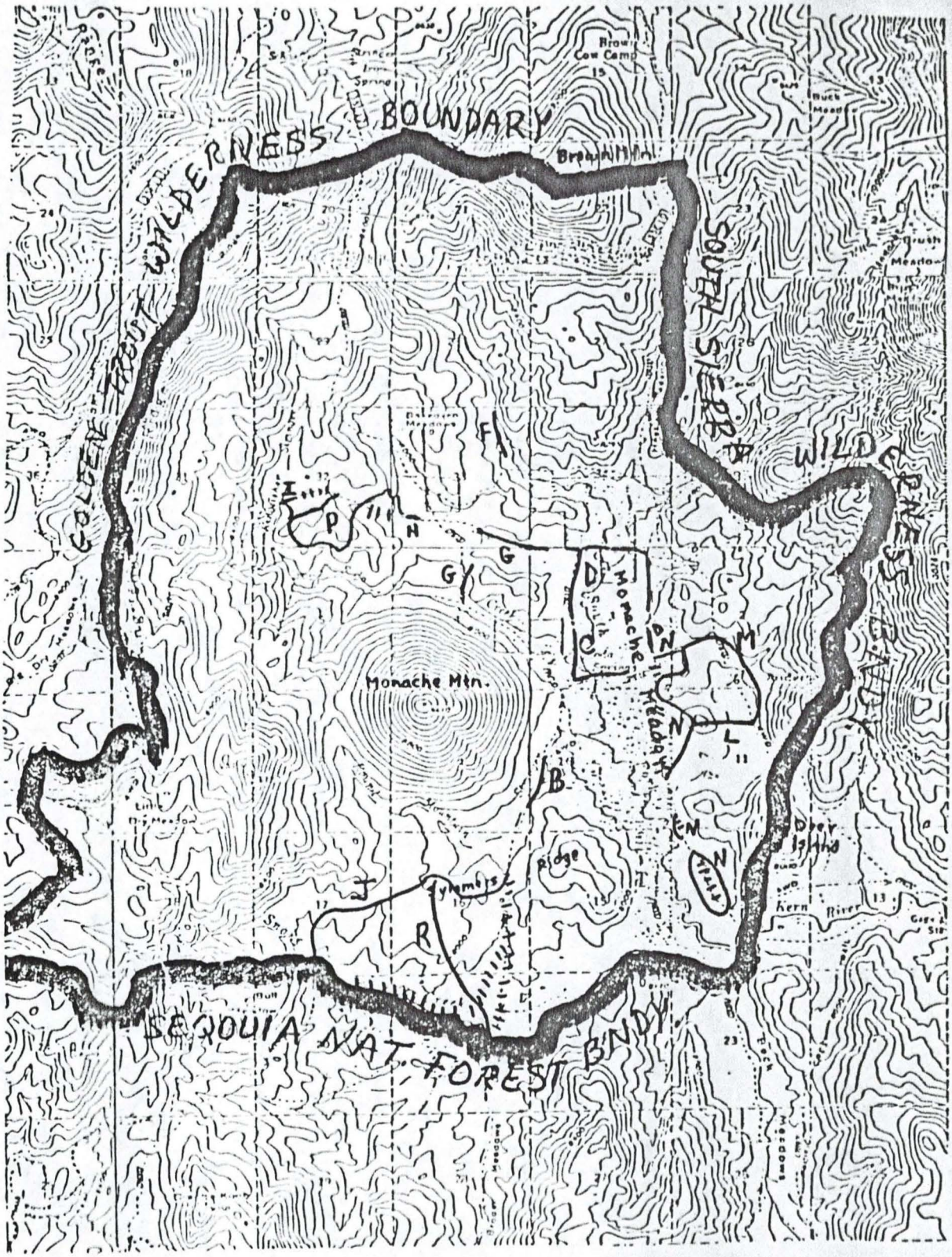


Photo 20. Looking southeast from same viewpoint (T) at Anderson Point and Deer Island area.



MAP 7: Alternative 5
Preferred Alternative

N

T. Bakeoven

This trail is approximately 3.1 miles long. It is designed to solve a dead-end road problem for motorbikes near a wilderness boundary. It would also add new motorbike opportunities. Its eastern terminus in at the ford along the upper reaches of the South Fork of the Kern River. After climbing to a ridge line, it stays on top of the ridge as the ridge broadens out. It then slowly drops and ends near the Bakeoven Crossing. If sub-part P were not selected for construction, this bike trail would be about .3 miles longer in reaching the existing access road. See Photos 19 and 20.

Alternative 5 - Preferred Alternative: This is the alternative preferred by the Interdisciplinary Team. It represents the mix of sub-parts that best meets resource and wilderness protection needs while enhancing OHV opportunities. The method of selecting the preferred alternative is discussed below.

This alternative contains the following sub-parts which were previously described. Map 7 displays these sub-parts.

TABLE 2
Preferred Alternative

Alternative Number	Sub-Part Name	Approx. Length (Miles)
2	B: Round Mountain Stringer Crossing	.4
	C: Soda Springs Complex	1.0
	D: Monache Meadow	5.0
	F: South Fork Meadow	.5
	G: Bakeoven East	1.3
	H: Bakeoven Crossing	.3
	I: Kingfisher Stringer	.2
3	J: Summers Ridge	2.0
	L: Deer Island #2	.8
	M: Anderson Point	1.4
	N: Monache Meadow	3.2
	P: Kingfisher	2.5
4	R: Broder Trail North of Snake Creek	1.5
TOTAL LENGTH OF NEW CONSTRUCTION:		11.4

Alternatives Considered But Eliminated From Detailed Analysis

a. An individual public scoping letter was received suggesting construction of a 4WD road from the Snake Creek ford to the Long Canyon road between Kingfisher Ridge and Kingfisher Stringer to create a loop. The letter was from attorneys representing Wilbur Rickett et al., owners of 40 acres of private land in Long Canyon. Approximate length of this route would be 4.5 miles. It was considered as a possible sub-part of Alternative 3, but was eliminated from detailed analysis for the following reasons:

1. It would be constructed in an area of riparian concerns.
2. It would negatively impact the Monache deer herd as well as habitat for spotted owl and pileated woodpecker.
3. It would be in a pristine, unroaded area.
4. It would conflict with decisions in the draft Forest Plan to exclude road building for timber purposes in this same area.
5. It would increase vehicle use significantly.
6. It would create user conflicts where it crosses and parallels an existing hiker/equestrian trail.
7. It was not supported by Cannell Meadow Ranger District; part of the proposed route would be on the Cannell Meadow Ranger District.
8. It would conflict with the Forest Order prohibiting vehicle use west of Kingfisher Stringer for riparian and wilderness reasons, and would cause increased vehicle trespass in wilderness.

b. Two public letters were received suggesting a bike route over the same alignment as #a above. These comments were from a bike rider and a biologist with California Department of Fish and Game. The biologist has since verbally retracted his support of this route. This trail was considered as a possible sub-part of Alternative 4, but was eliminated from detailed analysis for the same reasons as are listed above for route #a.

c. Seven individual letters were received requesting that vehicle traffic be excluded from utilizing the part of the MOHVSA east of the South Fork of the Kern River. They also requested revegetation of routes in the closed area. Letters requesting the same items were also received from Defenders of Wildlife and the Kern-Kaweah and Toiyabe Chapters of the Sierra Club. This proposal was considered but was eliminated from detailed analysis for the following reasons:

1. It would conflict with Forest Plan direction to bypass and eliminate dead-ends at the South Sierra Wilderness boundary. The Plan also directs the emphasis on semi-primitive nonmotorized and semi-primitive motorized activities and opportunities.
2. The California Wilderness Act of 1984 specifically released the Monache area back to multiple use management. If the intention of Congress was to exclude vehicles from a major portion of the area, the wilderness boundary would have been changed by Congress.

3. Under this proposal, California Department of Fish and Game and a cabin permittee would not be allowed vehicle access to their respective cabins east of the river. This would place an unnecessary burden on the enjoyment of these cabins and law enforcement duties performed by Fish and Game.
4. A popular dispersed camping area along Monache Creek southeast of Hessian Meadow is currently accessed by vehicle. This proposal would eliminate vehicle use of that area.

Changes in Alternatives Since Grant Request was Submitted to State Commission

Alternatives 2, 3, and 4 collectively contain all route segments mentioned in the original grant application to the State of California Off-Highway Motor Vehicle Recreation Commission (shown in Appendix A) except for the following changes:

Deletions

1. Proposed bike route from Snake Creek ford area to west corner of proposed Monache Mountain bike trail. It was eliminated from detailed analysis when closer study showed it to have the same inherent impacts as reasons 1-7 under route #a above.

Additions

1. Sub-part J (Summers Ridge) is an addition to the original proposal. It has been added to Alternative 3 to solve archaeological site impacts unknown at the time of grant application. The existing route would be repaired in sub-part A.

2. Sub-part L (Deer Island #2) was added to give a buffer to the Duck Stamp wildlife habitat improvement project approved since the 1985 Green Sticker grant request was submitted.

3. Sub-part N (Monache Meadow) was added as a result of subsequent field work that showed the feasibility of re-routing portions of the existing road out of the meadow and onto firmer, higher ground.

4. Sub-part Q (Summers Ridge to Deer Island) was initially proposed and mapped as a segment to help the Sequoia National Forest with a dead-end bike trail problem northeast of Broder Meadow. The concept was to make a loop to help solve their wilderness trespass problem. Subsequent field work revealed that their existing alignment was prone to staying muddy most of the summer and that a move to higher ground was not feasible due to cultural resource concerns. Another factor was a newly proposed Duck Stamp project which threatened to raise the local water level even higher. This caused the Sequoia National Forest to withdraw their request for the Inyo National Forest to assist with a loop connector trail. The Sequoia National Forest now plans to obliterate that stretch of trail since they will be building a large loop trail west from the Broder Meadow area. As a result, sub-part Q was changed to link up with the existing 4WD road on the southwest side of Deer Island to form a loop.

Evaluation Criteria

Evaluation criteria were developed as standards against which each alternative was measured. The purpose is to use the criteria to compare all alternatives against each other and to guide the selection of a preferred alternative. The criteria are developed from laws, regulations, plans, issues, and concerns. The actual values for each criterion are documented in Table 3 below.

The evaluation criteria are:

1. Acres of land in ROS classes semi-primitive nonmotorized (SPNM) and semi-primitive motorized (SPM).

This would indicate retention of existing natural character and recreation experiences and avoidance of impacting pristine area. This is a reaction to issues, concerns, and Forest Plan direction for this Management Area.

2. Estimated use increases one year after proposed development.
A locally developed formula for projecting use increases will be used. This formula is discussed in the Environmental Consequences section. This criterion responds to the public issue of stabilizing recreation use and the concern of changing the type of recreation experience due to increase in use and noise. For baseline purposes, Alternatives 1 and 2 will be assumed to have no growth, although each of the 5 alternatives would be subject to an unknown amount of inherent growth due to the growth in OHV usage.

3. Total route miles in OHV system.

This would be an indicator for the public issue of providing increased OHV opportunities, and the management concern over changes in the type of recreation experience due to increases in system mileage. The Forest Plan direction of maintaining the "unroaded" characteristics of the area and maintenance or enhancement of recreation and scenic values would be measured here.

4. Loops provided at wilderness boundary (YES/NO).

This represents the issue of impacts on wilderness, the concern of an increase in vehicle trespass in wilderness, and the opportunity to lower wilderness trespass and improve the experience of OHV users. This criterion is also addressed in the Forest Plan direction for this Management Area where use of loops is mentioned.

5. Per cent change in deer use.

This criterion represents the public issue of deer herd impact and the management concern of maintaining high wildlife habitat effectiveness.

6. Repair of existing damaged areas on vehicle routes (YES/NO).

This represents a public issue to repair existing damage. There is also the opportunity to reduce existing wildlife and riparian impacts through these repair measures. The Forest Plan directs the repair of existing routes to

mitigate damaged areas. This includes the use of runoff and erosion control improvements.

TABLE 3

Comparison of Alternatives Using Evaluation Criteria

	ALT. 1	ALT. 2	ALT. 3	ALT. 4	ALT. 5
ROS SPNM & SPM ACRES	13,450	13,450	13,450	8290	13,450
PERCENT INCR. IN USE	0	0	72/61	119	61
OHV ROUTE MILEAGE	20.0	20.0	25.8	29.5	24.9
LOOPS @ WILD. BOUNDARIES	NO	NO	YES	NO	YES
PERCENT CHANGE IN DEER USE	0	0	-7	-9	-5
EXISTING DAMAGE REPAIRED	NO	YES	NO	NO	YES

Rationale for Selection of the Preferred Alternative

The Interdisciplinary (ID) Team applied the evaluation criteria listed above to each alternative for comparative purposes. The ID Team selected the preferred alternative because it would:

1. repair existing damage along OHV routes;
2. solve dead-end routes at wilderness boundaries (and resultant vehicle trespass in wilderness) while enhancing OHV opportunities and increasing route mileage;
3. create lowest impact to deer use of the 3 construction alternatives;
4. create lowest estimated use increase of the 3 construction alternatives;
5. best retain the existing natural character and recreation opportunities as measured by ROS;
6. best meshes with the predominant "anti-development, keep-it-like-it-is" sentiment expressed by the public in the scoping process.

Mitigation Measures

1. Additional archaeological survey work is needed on Sub-parts L, M, P, and R. Those routes were added after the field season or need further study.

2. Whenever possible, locate routes on terrain that is unsuitable for other uses to reduce possibilities of conflicts.

3. Construct the trail with off-highway vehicles in mind.

4. Maximum trail grades will not exceed 14 percent. Continuous grades will not exceed 100 feet.

5. Rolling dips will be provided to drain the trail tread naturally.

6. Meet Visual Quality Objective of retention.

7. Install safety signing for road and trail crossing.

8. Utilizing Trail Management Handbook guidelines, use as much of the existing system as possible.

9. Locate the trail system a sufficient distance from sensitive areas to avoid noise conflicts and as a measure to prevent unauthorized use on or near the sensitive areas. One-quarter to one-half mile is usually an effective mitigating distance. Locating within 1/4 mile of a sensitive area should generally be avoided, but individual exceptions can be determined on a case by case basis.

10. To the extent possible, cross streams perpendicularly and minimize the amount of trail located within the streamside management zone.

11. To the extent possible, locate stream crossings where there is bedrock or other resistant channel material. If needed, use cinder block or other construction techniques to harden the approach to the stream crossing.

12. Determine the need for culverts and other improvements during the trail layout phase, utilizing the recommendations of the Forest Hydrologist, District Wildlife Biologist, and engineers.

13. Apply appropriate protection or restoration measures to OHV routes or segments of routes which are no longer needed as a result of the trail system developed under this project.

Implementation Plan

The objective of this rport is to document the analysis of several alternatives related to providing OHV recreational opportunities in Monache Meadow in an environmentally sound manner that perpetuates existing recreational use patterns and eventually assists in completion of a full-scale OHV Plan for this area once the Forest Plan is implemented.

The following implementation plan displays the proposed time frame for implementation of major steps in this process from selection of a preferred alternative to completion of rehabilitation and construction activities to completion of an OHV plan for the area.

After a decision is made and an alternative is chosen, there are several necessary steps to be taken for implementation. They are:

WHO	WHEN	WHAT
For. Sup.	8/87	1. Selection of preferred alternative and signing of Decion Notice
D.R.	10/87	2. Survey of each route in preferred alternative for following: a. T and E and sensitive plants b. Sensitive animal species c. Cultural resources d. Visual resource impacts Adjust route alignments as necessary based on these surveys.
For. Eng.	1/88	3. Prepare final engineering design of all selected routes. Collect sufficient data to allow contracting for rehabilitation and construction activities in 1988. Analyze existing resource damage areas for best method of solving problem.
Rec. Off.	7/87	4. Develop an informational program to contact recreational users. This will further our goal of informing and educating the user to minimize environmental impacts. This is a new, challenging area that has not been developed in Monache before (except for "a" below). This program will include: a. Utilize the nearby Blackrock Work Center on Sequoia National Forest as a key public contact point for providing information to the public b. Produce and distribute to the public a Monache factsheet on recreation opportunities and environmental consequences in standart R-5 format. Minimum impact techniques, a cultural resource message, and a map showing legal routes will be included. c. Place new display cases to better inform the public about the Monache area, including OHV

opportunities. These will be placed at Snake Creek ford (Forest boundary) and at South Fork Meadow dispersed camping area. Displays will include a detailed "You Are Here" map and dispenser box for factsheet mentioned above.
d. Improve signing as needed.

For. Sup	1988	5. Advertise and award rehab./construction contract
Contractor	1988	6. Rehab./construction contract work starts
Rec. Off.	1988	7. Modify informational program as needed to create quality contacts with the public, using self-service devices where feasible
D.R.	1989	8. Start comprehensive OHV Plan in Monache
Contractor	1989	9. Rehab/construction contract work continues (if necessary)
D.R.	1990	10. Continue comprehensive OHV Plan work in Monache

To date, budget figures have been estimates only. Once a preferred alternative is selected and exact routes are surveyed, a more accurate cost estimate will be possible. In the meantime, using per-mile estimates, the preferred alternative would cost approximately $125,000. Costs to the Forest Service through the design stage are estimated at $45,000, for a total estimated project cost of $125,000 + $45,000, or $170,000. The grant amount from Green Sticker is $118,000 (out of $235,000 originally requested). This leaves a projected shortfall of $52,000. This projection should be addressed once a more accurate construction cost estimate is made. Management may have to prioritize which portions of the preferred alternative are implemented first in order to stay within the grant budget. I recommend doing all reconstruction projects first to solve existing OHV damage. My second priority would be construction of Deer Island #2 to mitigate wilderness trespass problems, followed by Summers Ridge 4WD reroute (Sub-part J) to avoid meadow and archaeological problem areas.

Monitoring and Evaluation

The Inyo National Forest has received separate Green Sticker funding that provides 2 OHV patrol rangers in Monache each summer. Part of their job duties will be to monitor the MOHVSA for unacceptable resource impacts, use levels and patterns, and public comments about Green Sticker work to be performed by implementing the preferred alternative. Proper training of those employees will be provided. These items of concern will be formally documented to evaluate project results; they will submitted to the Recreation Officer at the end of each use season, or more frequently if an urgency exists.

Another crucial monitoring need is budgetary. A system of accounting must be applied to ensure that existing grant funding is available to cover all planned work, including contractual obligations.

III. AFFECTED ENVIRONMENT

The following are elements of the environment studied in detail that could be affected by implementing the alternatives. These elements are related to the issues and concerns identified during scoping and cited above.

A. PHYSICAL ENVIRONMENT

1. Air

The MOHVSA is located in the San Joaquin airshed. There are presently no direct impacts to air quality. There are no Class I areas within or adjacent to the MOHVSA.

2. Geology

There has been no mining activity or quarries within the MOHVSA.

3. Noise

The ambient noise level in the MOHVSA is low to zero. Natural noise sources include wildlife, wind, and occasional summer thunderstorms. Most notable noise sources are 4WD vehicles, motorbikes, and firearm discharges. Other noise sources are generally associated with camping activities and aircraft.

4. Visual

The area is characterized by large, open meadows, dominated by the centrally located Monache Mountain. The meadows are bordered by gently rolling timbered ridges on the west and north sides, and to some extent on the south. East of the meadows is found gently rolling ridges with sagebrush and occasional clumps or stands of timber. Monache Mountain is forested.

Existing structures on private land are visible from the meadows. Other structures on federal land are partially or totally screened. Range fences are visible throughout the area. A primitive phone line is visible as it crosses one of the meadows. An airstrip on private land is seen only from the air.

Under current management direction, the visual quality objectives for land within the MOHVSA is retention. The visual sensitivity of land within the MOHVSA is influenced by several factors: 1) since the MOHVSA is bounded on three sides by wilderness, it serves as an access route for wilderness users who are very sensitive to changes from natural conditions; 2) the MOHVSA is heavily used as a destination site for many campers and fishermen; and 3) since the MOHVSA contains one of the largest meadow systems in the Sierra Nevada, the area is identified as being very important to a variety of environmental groups.

The retention objective provides for management activities which are not visually evident and may only repeat form, line, color, and texture which are frequently found in the characteristic landscape. Accomplishment of

this objective should be either coincident with project work or immediately afterwards.

5. Watershed and Soils

The soils in the MOHVSA are derived from granitic, andesitic, and metamorphic rock sources. They are sandy or loamy in texture. One-third of the soil types in the area contain large amounts (greater than 35 percent) of rock fragments throughout their profiles. Depth to bedrock can be greater than 60 inches. On steeper slopes, bedrock is exposed.

Soil erosion is the major soil management concern. Historic overgrazing by livestock, continued trampling of the immediate stream bank, and concentrated OHV use has resulted in erosion in the form of gulleying and headcutting in the meadowlands.

The South Fork of the Kern River drains the area. The water is used for instream values, irrigation, recreation, domestic and municipal, and hydroelectric purposes downstream.

As a result of soil and grazing conditions, Kingfisher Stringer, Soda Creek, and Snake Creek have incised, resulting in water tables 5 to 10 feet below old meadow elevations. With changes in vegetation and drainage patterns, the sediment transported from the eroding hillsides has gone through the meadows directly into the streams.

B. BIOLOGICAL ENVIRONMENT

1. Fisheries

The Kern River system is the native home of the golden trout, California's state fish. The presence of other fish species in the area, and in adjacent native golden trout waters can be attributed to human influence.

The following four species occur in Monache:

The South Fork Kern golden trout (SFKGT) is the subspecies present in the MOHVSA. Fisheries management on the Kern Plateau emphasizes the importance of maintaining or restoring golden trout populations. Introduced fish species are one of the man-caused threats to the golden trout. The poor condition of trout habitat, resulting from accelerated erosion, is another. Optimum trout habitat is typified by undercut banks and overhanging vegetation. The river channel has become wider and shallower because stream banks have broken down. More stream surface is consequently exposed to heating from direct sunlight. Warm water is unfavorable to trout.

Brown trout were introduced into the South Fork near Monache Meadow in the 1940's. When the general problem of brown trout predation on golden trout was recognized in the mid-1960's, they had spread throughout the drainage and become the predominant fish species. This predation has caused declines in golden trout numbers.

Rainbow trout were transplanted to Nine Mile Creek in the 1940's. Currently they are common throughout the Monache area. Rainbows and goldens readily interbreed, which may result in the eventual loss of pure golden trout populations.

Sacramento sucker is a common inhabitant of the South Fork.

2. Vegetation

a. Threatened, Endangered, and Sensitive Plants

There are no known threatened, endangered, or sensitive plants located within the area. Detailed inventories have not been completed throughout the area.

Astragalus subvestitus, once on the Forest Sensitive Plant List, is known to inhabit some of the sandy meadow margins of the Monache area. It is still on the California Native Plant Society "Watch List."

b. Other Vegetation

Coniferous forest covers 72% of the area while the chaparral community covers 7% of the area on dry, rocky slopes.

A large and important mountain meadow and riparian community covers 21% of the area. The flora of the wetlands consists of many species of grasses, sedges, rushes, and forbs, with willows along some of the water courses.

There is a large acreage of dryland meadows with the flora consisting of brush, grasses, sedges, rushes, and forbs.

3. Wildlife

The vegetative diversity and relative isolation of the MOHVSA provides habitat for unique wildlife resources. More than 45 mammal, 90 bird, and numerous reptile and amphibian species occupy the area.

No threatened or endangered species are known to exist within the MOHVSA. However, the following species are of concern because they are either: sensitive, threatened or endangered and might occur in the Monache area; of special interest; or most likely to be affected by OHV activities.

a. Mammals

Sierra Nevada red fox, pine marten, and fisher are classified as sensitive species by the Forest Service in California. The Monache Meadow area contains potential habitat.

Mountain lion is currently protected in California. The mountain lion population utilizing Monache is one of the only lion populations in the state currently in balance with its primary prey species, mule deer.

Mule deer are of special concern in the MOHVSA. The Monache deer herd is a migratory herd located in eastern Tulare and Kern Counties and the extreme southwestern portion of Inyo County.

The Monache Deer Herd Plan was approved in 1981 by the California Department of Fish and Game, the Bureau of Land Management, and the Forest Service. It provides direction for management of this herd. The primary management goal agreed upon by the agencies is to maintain an annual spring population between 8,000 and 9,000 animals. The current population size is estimated at 7,000 to 8,000 animals. This goal would be accomplished primarily by maintaining and improving habitat conditions.

The MOHVSA is important for the Monache deer herd for three reasons: 1) it contains five migration corridors; 2) it is used as a holding area for 60% of the herd; and 3) 15% of the deer herd remains in the area throughout the summer.

b. Other Wildlife

Raptors can inhabit every vegetation type within the area. Although no formal surveys have been conducted, raptors use the MOHVSA from spring through fall. The following raptors are of particular concern:

Goshawk is classified as a sensitive species by the Forest Service in California. The old growth coniferous forest and the aspen stands surrounding Monache Meadow are suitable nesting habitat for this species.

Spotted owl is classified as a sensitive species by the Forest Service in California. The mixed conifer old growth forest on Kingfisher Ridge is potential habitat for this species. The nearest known spotted owl sighting is at Beach Meadow on the Sequoia National Forest, approximately 7 miles southwest of the MOHVSA.

Existing population levels for primary and secondary cavity nesting species appear to be 100% of the potential maximum. Snag numbers are very high in the old growth forest around Monache Meadow. The indicator species for snags are the brown creeper, Williamson's sapsucker, and pygmy nuthatch. Another species of special concern is the pileated woodpecker.

Snags are important to many species of wildlife. Fuelwood collection occurs along travel routes in the MOHVSA. Only dead and down material may be legally collected. There is an unquantified small amount of illegal collection of standing snags.

No breeding bird surveys have been conducted for riparian dependent species.

Yellow warbler is the Inyo National Forest Management Indicator Species for riparian vegetation.

Waterfowl (mallards, pintails, green-winged teal and blue-winged teal) nest within the area on three known ponds.

Willow flycatcher is classified as a sensitive species by the Forest Service in California and serves as the Management Indicator Species for wet meadows in association with willows.

C. SOCIAL ENVIRONMENT

1. Access

Vehicle access to Monache crosses the Sequoia National Forest. See Map 2. The existing roads which may be used for access are in relatively good condition. The Monache Jeep Road has sections of steep grades, tight turns, and a sloping road surface. The road is not suitable for large or oversized vehicles, including horse trailers. In 1987, it is expected that both the Sequoia and Inyo National Forests will develop Forest Orders making the Monache Jeep Road four wheel drive or motorbike only for resource protection.

Historically, the road system has been usable only during the summer season with winter snows usually closing the road from mid-December through late May.

2. Administrative and Special Use Areas

There are 6 special use permits within the boundaries of the MOHVSA. These permits are for cabins, pastures, corrals, a pipeline, and a fish barrier on the South Fork of the Kern River. The road from Kingfisher Stringer to Long Canyon and the appropriate means of access to private land within wilderness is being addressed in a separate environmental analysis.

Some short term permitted uses occasionally take place in the MOHVSA. A number of commercial photography permits have been issued in the last 4 years. Two military units hold survival training sessions here during both winter and summer months every year.

Range facilities that are presently on term permits include 2 cabins, 2 pastures, a corral, and an allotment boundary fence between the 2 grazing allotments.

A Forest Service administrative site with a cabin is located north of Soda Creek Meadow.

3. Cultural Resources

Current research indicates that certain high altitude Sierra meadows have had human habitation for the past 10,000 years. Early research work done in Monache Meadow by an archaeological field reconnaisance crew from UCLA indicates that the area has been occupied for much, and perhaps all, of that time. One hundred thirty-one prehistoric sites, ranging in size from small obsidian flake scatters to large seasonal camps, were recorded. Projectile points, either associated with the sites or found as isolates, date from possibly 9,000 years ago to the late prehistoric period. More recently, an Archaeological Reconnaissance Report, #05-04-388, was conducted specifically for this OHV proposal. Four more prehistoric sites

were recorded. Altogether, these data indicate a long and complex history of human use in this portion of the Kern Plateau.

Since the meadow is accessible from both sides of the Sierra, it was likely a place where contact and trade between groups from the east and west sides took place. The name of the meadow itself, Monache, refers to a group of people who inhabited the western slopes of the Sierra further north. Historic land use seems to have been confined to grazing and recreation. These activities have and continue to impact the prehistoric record.

Each site contains information necessary to discover the patterns of human settlement and subsistence over the millennia the meadow has been inhabited. In management terms, this means that every site is potentially significant.

4. Protection and Law Enforcement

From 1969 through 1984, there were 55 lightning-caused fires and 4 man-caused fires suppressed within the MOHVSA or within one mile of it. These fires were all less than one-quarter acre in size. Unstable air brings periods of intense lightning activity in and around the MOHVSA. Usually, the precipitation is scattered and fires are able to start. Man-caused fires have resulted from blasting to improve trails and hunters' warming fires.

The majority of law enforcement citations within the MOHVSA result from operating motor vehicles in restricted areas. A relatively small number of citations are given for illegal or abandoned campfires.

5. Private land

There are approximately 440 acres of private land within the boundary of the MOHVSA. The private land holdings are located in areas of wet meadows, drier grassland and sagebrush flats adjacent to the South Fork of the Kern River. Some steeper, timber-covered slopes on the northeast corner of Monache Mountain are included in one private parcel.

6. Range

The Monache grazing allotment overlaps the MOHVSA. A total of 885 cattle, most with calves, are permitted on the Monache allotment from July 1 to September 30 each year, totaling approximately 1,460 cow months of use. The MOHVSA constitutes approximately 55% of the grazing on this allotment. Also, 40 head of permittee horses are pastured in the MOHVSA.

7. Recreation

The setting for the MOHVSA is a highly scenic, natural appearing, pristine high-mountain environment. The area is bounded on three sides by high, timbered ridges which are within designated wilderness areas. Important features of the MOHVSA include: 1) the open Monache Meadow which expands out from the free-flowing South Fork of the Kern River; 2) Monache Mountain, which is a volcanic cone nearly centered in the MOHVSA; 3) the

interwoven timbered ridges, rocky outcrops, and stringer meadows, and 4) the fragile high-mountain vegetation. The area is used by those who desire a semi-primitive recreational experience or by those who are accessing adjoining wilderness areas for a primitive recreational experience.

The MOHVSA offers a variety of opportunities for dispersed recreation including dispersed campsites, picnic areas, 4WD roads and motorbike trails. In 1985, dispersed recreation use (i.e., recreation occurring outside developed recreation sites) in the area was an estimated 12,736 recreation visitor days. One visitor day is 12 hours of recreation use. All use in Monache is dispersed; there are no developed recreation sites or facilities in the area

The following table shows the dispersed use by activity in the Monache area for 1985. Winter use is well under 1%, and so was not reported.

TABLE 4

Dispersed Recreation Use (1985)

Activity	Percent of Use	Number of Visits	Visitor Days
Camping	52	2,424	6,623
Four-Wheel Drive Use	20	6,020	2,547
Motorcycle Use	13	3,649	1,656
Recreation Cabin (Private & Permittee)	6	211	764
Horseback Riding	3	N/A	382
Fishing	3	N/A	382
Hiking	1	N/A	127
Big Game Hunting	2	N/A	255
TOTAL	100%	12,304	12,736

Camping and the use of four-wheel drive vehicles and motorbikes comprise an estimated 85% of total use. The heaviest use, in terms of total visits, is 4WD and motorbike use. This shows that users are OHV-oriented.

The MOHVSA offers large vistas, river access, a 20-mile system of 4WD roads and motorbike trails, highly scenic natural surroundings, and pleasant summertime temperatures. There are few areas on the Inyo National Forest that offer this type of recreation experience.

Visitor days and number of visits statistics do not display a completely accurate record of hunting, fishing, and hiking use. For example, hunters will usually access the area by 4WD vehicle and camp overnight. The driving and camping portions of their visit is recorded under "Camping" and "Four-Wheel Drive Use" rather than "Big Game Hunting."

Recreation use in the summer is heaviest on weekends and holidays. This is due to the fact that the MOHVSA is a popular weekend destination for residents of Bakersfield, Kernville, Ridgecrest, and surrounding areas.

Monache Meadow is the focus for recreation. Activities occurring in the meadow and vicinity include camping, picnicking, fishing, and hunting. A typical summer weekend would see approximately 150 day users and 20 to 40 overnight users. Camping occurs in dispersed campsites at the forest fringe facing onto the meadows. These are primitive sites containing only homemade improvements. Picnicking occurs throughout the area. Fishing is quite popular along the banks of the South Fork of the Kern River.

Deer hunting opportunities are excellent, partly due to a high percentage of bucks in the herd (47 bucks per 100 does in 1984). Past hunting pressures have caused a deer tag lottery to be activated. In 1984, a total of 700 permits were issued for this area. The success rate for the Monache hunts is one of the highest in the state at 26%. The average success rate for the rest of California is less than 5%.

The Monache deer herd also provides excellent opportunities for non-consumptive uses. The chance to be able to observe a large herd of deer at one time is possible within the Monache Meadow area and is considered aesthetically pleasing to a number of recreationists.

There are approximately 160 acres of land in the MOHVSA identified as specific use sites. This land is primarily used for dispersed camping and picnicking. Such areas are accessed predominantly by 4WD vehicles and motorbikes. These areas are popular because they are the ones offering the best recreational experience. Current use levels generally allow the maintenance of camping and picnicking areas in good condition with respect to soil compaction, water quality, vegetative cover, and erosion. The current potential for overuse is kept in check by the access route being fourwheel drive.

The Monache area contains 20 miles of 4WD roads. These roads lack drainage stuctures, proper meadow or stream crossings, or any other erosion prevention planning or design. These roads provide access for most other recreation in the area. Four-wheel drive use accounts for 49% of all recreation visits in the Monache area. This road system, along with .8 miles of motorbike trails, provides recreation opportunities for motorbike users. Their use accounts for 30% of all the recreation visits in the MOHVSA.

Recreation Opportunity Spectrum Classification

Land within the MOHVSA has been classified by a method of recreation system planning known as Recreation Opportunity Spectrum (ROS). ROS involves a mapping process to determine where a specific piece of ground fits on a six-category spectrum of recreational opportunities. ROS categories are sensitive to the naturalness of the recreation setting provided to the user. These categories are a combination of physical, social, and managerial settings. Physical setting looks at types of roads, remoteness, area size, and evidence of human modification of the landscape. Social setting analyzes the amount and type of contact between

individuals or groups. Finally, the managerial setting reflects the amount and kind of restrictions placed on people's actions by the administering agency. As changes in these settings occur, the type of recreation activities and opportunities that the area would provide are changed along the ROS spectrum. The key is to predict and manage these changes to provide recreation experiences as directed by the Forest Plan. In order of increasing urbanization, the 6 ROS categories are: primitive, semi-primitive nonmotorized, semi-primitive motorized, roaded natural, rural, and urban. Currently, the MOHVSA consists of a corridor of semi-primitive motorized land approximately 1/2 to 1 mile wide, centered on the main 4WD road. This corridor is flanked by semi-primitive nonmotorized land, which is then bounded by primitive land several miles further (outside the MOHVSA).

8. Wild and Scenic River

The segment of the South Fork of the Kern River (SFKR) which flows through the MOHVSA has been under study by the Forest Service for designation under the Wild and Scenic River Act. Designation recommendations will be made part of the Land Management Plans for both the Inyo and Sequoia National Forests. Management activities in the MOHVSA cannot adversely affect the Wild and Scenic quality of the river until a designation determination is completed by Congress and the remaining sections of the river are classified.

Segment 5 of the SFKR lies wholly within the MOHVSA. In the study, "outstandingly remarkable" values have been assigned to scenic, recreation, fisheries, vegetation, and geology resources.

The SFKR is a shallow, slow-moving stream that meanders through Monache Meadows for about 5 of the 8-mile length within the MOHVSA. Elevation loss in Segment 5 is approximately 750 feet over the 8-mile length.

Riparian vegetation is sparse and narrow to non-existent. The draft Forest Plan estimates that there is approximately 6 miles of existing OHV routes that would influence the river. Due to gentle topography, scattered timber, and large, open meadows, the river corridor is visible from 2 to 3 mile distances.

9. Wilderness

The MOHVSA is bounded on 3 sides by designated wilderness areas--the Golden Trout Wilderness on the west and north and the South Sierra Wilderness on the east. Access to the Golden Trout and South Sierra Wildernesses is available through the MOHVSA. The actual use of entry points is thought to be low because of the difficulty in getting into the MOHVSA and the generally low use in adjacent wilderness areas. The current use pattern is that most local use enters the wilderness several miles to the southwest at Blackrock Saddle Trailhead. A limited amount of "through traffic" on the Pacific Crest Trail (PCT) flanks the Monache area on the east. Estimated usage on the PCT is 300 persons annually.

The following section discusses wilderness values existing in the Golden Trout and South Sierra Wildernesses in the vicinity of the MOHVSA:

a. Opportunities for Solitude: Opportunities are exceptional. The remoteness and difficulty of access result in few people entering the wilderness in this area. The gentle topography with varying cover can absorb more people than currently use the area without affecting solitude.

b. Opportunities for Primitive Recreation: Opportunities are good because major trails do not concentrate people, and the area can absorb people. However, there is little diversity and challenge.

c. Natural Integrity and Natural Appearance: Signs of human influence include presence of unimproved roads and vehicle tracks as well as soil compaction and vegetative changes due to cattle grazing. Otherwise, the area has the overall appearance of undeveloped high country.

d. Special Features: In the Golden Trout Wilderness, the native golden trout (California's state fish), historical structures, large, open meadows providing wide-ranging views, openness, and vistas from scenic high points, and overall remoteness from easy access and concentrations of people are special features of the general area north and west of the MOHVSA.

In the South Sierra Wilderness, a special feature is the Pacific Crest Trail which traverses north-south near the MOHVSA. Large open meadows and wide ranging vistas from PCT view points are typical.

e. Freedom from Sights and Sounds of Mans' Activities: Currently, the noise and dust from 4WD's and motorbikes in the Monache area are evident to wilderness areas. This detracts from this value.

10. Socio-Economic

a. Economic Environment

While 100% of the MOHVSA is located within Tulare county, it is isolated from most of Tulare county by the Sierra Nevada Mountains. Economic and use benefits of the MOHVSA are more closely linked to Inyo and Kern counties to the east and south.

Recreation dominates the Inyo County economy. Residents of southern California make heavy use of recreational facilities and resources within the county, and strongly affect the economy of many county communities. The impact of product output from Inyo County is lost in the large population and diverse economy of the user areas.

Population

Population growth in Inyo and Kern Counties has been continuous during the past decade. Inyo County's population has increased 15% over that decade. The population of Inyo County in 1980 was 17,900. Population projection for the year 1990 is 20,200. Kern County's population

increased 22% over the past decade. The population of Kern county in 1980 was 403,089. The projected population for the year 2000 is 504,300.

Employment

The importance of tourism and the public sector to Inyo County is evident from the fact that service, retail sales, and government employment account for nearly three-quarters of the total wages for workers in 1980.

Economic Contribution from the MOHVSA

Economic contributions from the MOHVSA consist of receipts from a grazing allotment and benefits derived by local communities and businesses from recreation use.
The MOHVSA also contributes to the revenues of Kern, Inyo, Mono, and Tulare Counties through Forest expenditures, Receipts Act payments, and payments in lieu of tax fees.

b. Social Environment

Sphere of Influence

Both Inyo County and the eastern half of Kern County are rural and sparsely populated. Personal income averages about $14,300. The area is over 83% Caucasian, 7.3% Native American, 7.3% Hispanic, with Black, Asian, and other races making up less than 2% of the total population. Similar statistics apply to the eastern half of Kern County.

While the MOHVSA is used by individuals who live throughout southern California, the primary zone of influence is southern Inyo and eastern Kern Counties. This area is expected to receive direct benefits and potential impacts from development. The lifestyle, quality of life, and social values of the individuals in this area are to varying degrees dependent upon MOHVSA and adjacent Forest resources and facilities.

Social Groups

The use of resources within the MOHVSA affects several social groups, each of which places different demands and values on resource use. Three major social groups affected by resource use within the MOHVSA are long-term residents, seasonal recreationists, and Native Americans. These groups are not mutually exclusive but the consequences of resource uses are similar for individuals within a group and are somewhat dissimilar between groups. Although these categories may produce some incorrect stereotypes, the following characteristics generally apply and represent a way of evaluating the social impacts of changing resource use.

Long-term residents are a diverse group of people generally identified by having lived in the area 10 years or longer. This is a broad group of people working in many sectors of the local economy including mining, retail sales, ranching, logging, recreation, and services. Generally, the long-term resident is strongly self-reliant, believes in the importance of hard work, holds to traditional values, and enjoys rural living. Changes in resource use within the MOHVSA (recreation opportunity, grazing

availabi' .y, wood gathering) could potentially affect many of the long-ter. residents of the primary zone of influence.

Seasonal recreationists are attracted to the area to enjoy a semi-primitive four-wheel drive oriented recreation experience. This experience often includes fishing, hunting, motorcycle riding, and accessing adjacent wilderness. This group includes recreationists who reside in the area and recreationists who enjoy the area for summer vacations and weekend outings. Seasonal recreationists place moderate demands on the area and have high expectations for their recreation pursuits. These recreationists generally provide a small portion of local economic support. While this group is made up of many subgroups, as a whole they generally value the restricted recreational opportunity afforded them and the visual qualities of the area.

Representatives of several Native American groups who used the MOHVSA still live within the primary zone of influence. The Native American's way of life, beliefs, and values are interwoven with nature, the environment, and the mountains in the MOHVSA. Use of the area relates to hunting and gathering of food items and other materials, religious sites and spiritual areas. The Native Americans usually favor protection of the forest and continuance of traditional uses.

IV. ENVIRONMENTAL CONSEQUENCES

The following is a discussion of the consequences of implementing each alternative. Again, these alternatives are:

1. Alternative 1 - No action
2. Alternative 2 - Reconstruction of existing routes
3. Alternative 3 - Construction of new four wheel drive roads
4. Alternative 4 - Construction of new motorbike trails
5. Alternative 5 - Preferred alternative

The consequences are discussed as they relate to each issue and concern in the order in which they were identified in the Affected Environment section. Direct, indirect, unavoidable, cumulative, short term, and long term effects are discussed. Also discussed are adverse environmental effects which cannot be avoided and irreversible and irretrievable commitment of resources. An effect is any change from the present situation that is caused by implementing an alternative.

A. PHYSICAL ENVIRONMENT

1. Air

Alternative 1

This alternative would result in no change in air quality within the MOHVSA. The Class II designation is easily met under current management.

Alternative 2

Development would result in direct, short-term impacts as a result of increases in dust and discharges from motor vehicles and construction equipment. Air quality objectives for the Class II designation could be met under this alternative.

Alternative 3, 4, and 5

Same as Alternative 2.

2. Geology

Alternatives 1-5

These alternatives would result in no change in the geologic resource.

3. Noise

Alternatives 1 and 2 would continue present noise levels.

Alternatives 3,4,and 5 would result in direct, short and long term, unavoidable impacts from higher noise levels within the MOHVSA. The alternatives may differ only in magnitude and location of the source of increased local noise levels. Noise above ambient levels would be generated by road and trail construction, vehicular traffic, equipment

movement and operation, and human use. Increased traffic would have the greatest potential to create noise audible some distance outside the project area.

The direct and indirect impacts which result from increased noise levels mostly affect recreational use and wildlife and are discussed under those headings.

4. Visual

The following discussion focuses on the interrelationship of visual resources with motorized and nonmotorized users in Monache.

The key viewpoints are from the trails themselves and along the South Fork of the Kern River. The 4WD and bike trails are not near as critical viewpoints as the hiker and equestrian trails. From the hiker/equestrian trails and the river zone, the VQO to be met will be retention in all distance zones. Some of the area will not be seen and therefore any new trails and activity will meet retention in those areas. There should be no problem meeting retention in any middleground or background views. The foreground zone (0-1/2 mile) would be the only area where trails might be seen from critical viewpoints. The exception to this would be a steep segment of trail directly in line with a critical viewpoint where it would be visible from more than 1/2 mile.

The largest visual impact would be the activity and vehicle movement on the trails themselves. It would be difficult to meet retention from many sections of foottrails relating to the movement of vehicles. Noise would attract the viewer's attention, and movement would then catch their eye. Thus, activity would appear more visible than a stationary object. The VQO system was not designed to analyze activity; however, depending on how close the motorized activity is, it could have an impact that would relate to partial retention to maximum modification. If the bike trail crosses the foot trail and a biker crossed in front of the hiker, the hiker probably could make a case that the activity was visually unacceptable. However, since the management direction says that the area will be used by both motorized and nonmotorized users, both have to accept the other to a degree. It would be prudent to have the trails cross as little as possible. This would help to reduce user conflicts.

Of particular importance are those areas of variety class A attractions. These include any water features, riparian vegetation, and outstanding topographic or geologic features. This would include the bulk of Monache Mountain which is a significant visual landmark. These areas tend to be focal points in any view and will be what the viewer looks at longer than anything else. Any trails or activities located in or near one of these highly visible features will tend to be visually degrading to the viewer. Of most importance will be water and meadows. Ideally, all mechanized trails should avoid these areas and instead use areas of solid ground with good vegetative cover. Any motorized trails that are located in wet areas will be difficult to maintain and control. Since these water and meadow zones are where the nonmotorized users will be concentrated, the motorized trails in these areas will probably not meet partial retention.

Comments on the alternatives and specific sub-parts are:

Alternative 1

Specific visual impacts of the current system of vehicle roads and trails would continue in a downward trend as expected use increases stretch maintenance funds even thinner. Most bog holes would get worse, causing multiple tracks and further degrading the natural character of the landscape. Approaches to river and stream crossings would tend to be spread out, further degrading the sensitive water viewpoints.

Alternative 2

In the short term, areas being rehabilitated might appear freshly scarred from these reconstruction activities. In the long term, as the land heals, these same areas would meet the assigned VQO of retention. A single, defined, passable route would be available through areas that are currently visually degraded.

Alternative 3

Sub-part J (Summers Ridge) would have positive impact on visuals by replacing the existing 4WD road in Snake Creek Meadow where it is an eyesore. The new route would be located on top of Summers Ridge and would be generally well-screened by timber. Some vistas or overlooks at natural openings would be present.

Sub-part K (Deer Island #1) would create both positive and negative visual impacts. On the plus side, this route would allow vehicle users an opportunity to drive to an elevated overlook of Monache Meadow and the South Fork of the Kern River. On the other hand, users in the meadow and along the river would be negatively impacted by the sight of vehicles using this proposed route. From the key viewpoint along the river, some portions of this route would not meet the VQO of retention.

Sub-part L (Deer Island #2) would not have the same magnitude of positive and negative visual impacts as Deer Island #1. The elevated viewpoint is much lower and not as visually impacting, both looking out from it and viewing it from the meadow and river areas.

Sub-part M (Anderson Point) would be screened from key viewpoints by a ridge to the west. It would have no negative visual impact but would create a slight positive impact by allowing motorized users a more elevated viewpoint.

Sub-part N (Monache Meadow) would impact visuals negatively by having the two southern segments located near the river. This would allow better user access to the river but would not meet the retention VQO.

Sub-part O (South Fork) would have a positive impact on visuals through removing vehicle usage from a meadow visible from the river. The new route would be elevated, giving OHV users better views of the river through natural breaks in the timber that would screen the route.

Sub-part P (Kingfisher) would positively impact visuals by replacing a short, damaged meadow stretch. Also, it would provide new views of the Soda Creek and Monache Mountain areas from an elevated viewpoint.

Alternative 4

Sub-part Q (Summers Ridge to Deer Island) would have both positive and negative visual impacts. On the positive side, bike riders would have a panoramic overview of Snake Creek and the Monache Meadow/South Fork of the Kern River area from the elevated position on Summers Ridge. On the negative side, the VQO of retention could not be met due to bikes on this new route disrupting the tranquil setting for stationary viewers.

Sub-part R (Broder Trail North of Snake Creek) would have consequences similar to those in Q above. They would be of a smaller magnitude since the Snake Creek area is less heavily used by nonmotorized users than the Monache Meadow area.

Sub-part S (Monache Mountain) would cause positive and negative visual impacts. The positive impacts would be to the riders in creating an elevated, panoramic view of a natural landscape containing timbered ridges, large meadows, and streams and rivers. The negative impacts would be to other viewers seeing motorized activity on Monache Mountain. This mountain is a significant visual landmark and tends to keep the viewer's attention longer. Vehicle use of this trail would tend to be visually degrading to the viewer. This impact would be tempered by the vegetative screening on the mountain. There would also be a negative visual impact from the crossing of the lush Soda Creek area.

Sub-part T (Bakeoven) would be similar to S above in creating positive and negative visual impacts.

5. Watershed and Soils

Alternative 1

There would be no change from the present. The opportunity to rehabilitate damaged areas would be delayed. Five acres would erode at rates higher than natural. Where roads and trails cross meadows, 390 acres of meadow would be threatened by further gulleying.

Alternative 2

This would result in the reduction of the amount of damaged and eroding road surface. As many as 5 acres would be rehabilitated and as many as 390 acres of meadow, threatened with erosion, would be protected.

Alternative 3

An increase in road surface area would cause an increase in erosion sediment.

Construction activities would cause removal of the vegetative cover. Gulleying could occur on exposed steeper slopes especially where road and

trail gradients are not on the contour. This problem could be substantially mitigated through proper design, construction, and maintenance. Erosion and soil stability problems could develop on cut and fill slopes in all construction areas. The chance of problems developing would depend on cut and fill size and soil properties. Vegetative production would be lost where soil is permanently removed by roads.

For subparts K, L, O, and P, portions of these areas would have slopes from 8-10%. Although these are moderate slopes, they can be expected to have sediment yields above natural levels. Also, they would channelize runoff into more specific drainage areas. A total of 6 acres of new roads would be susceptible to greater erosion.

Alternative 4

The construction of new trails would increase sediment loads above natural levels. Motorbike trails typically become entrenched and channelize runoff into very specific drainages. New trails could slightly increase sediment loads to meadows and streams, especially on steeper segments such as S & T.

Side-throw of soil material is another problem with motorbikes. This causes further entrenchment of the trail and soil erosion. The steeper the slope, the greater the degree of soil movement. All new areas would demonstrate this and any soil movement would be above the present level. Movement of the Broder Trail (R) to its proposed alignment would have positive and negative effects. On the positive side, .3 miles of the existing trail that has erosion damage would be replaced with a totally new alignment. Also, the existing crossing of the Snake Creek riparian zone would be reconstructed to stop most of the erosion problems there. On the negative side, this new trail may cause increased traffic on the trail which could cause increased erosion problems as stated above.

Alternative 5

This will provide for the rehabilitation of 5 acres of eroded land and eliminate the threat of further gulleying on 390 acres of adjacent meadows. Consequences would include those of Alternative 2 and Alternative 3 except for the subpart K and O where some of the steeper segments are located. Also the same effects would result here as they did in Alternative 4 for the Broder Trail.
There would be a reduction in sediment from the existing road because of upgrading to provide access. There would be the opportunity to improve the drainage on the existing road and provide for low impact stream crossings.

B. BIOLOGICAL ENVIRONMENT

1. Fisheries

Alternative 1

This alternative would result in no change in the fisheries resource. Management opportunities to upgrade sections of existing roads to rehabilitate fish habitat would be delayed.

Alternative 2

Upgrading of the existing road system under this alternative would reduce sediment yield from the existing roads.

Alternative 3

Sediment yield from the construction of new roads would increase. Due to the limited area available for occupation, the gentle terrain, and less than 15 inches of precipitation in these areas, the amount of sediment delivered to the stream could be held to a minimum.

Increased use would have a twofold impact on the fishery. First, an increase in harvest would occur with increased fishing use. Special regulations or fish plants may be required to satisfy the fish harvest demand. The second impact and primary concern is the potential for individuals to move non-South Fork Kern golden trout (non-SFKGT) above the Schaeffer barrier. The distance buffer reduces the possibility that exotic species transplants would occur. This alternative may decrease the potential for recovery of SFKGT habitat in the MOHVSA because of the increase in public use and demand for fish harvest.

Alternative 4

An increase in sedimentation would occur and would be locally high, although most of it would not reach the streams.

Alternative 5

This alternative is the same as Alternative 3.

2. Vegetation

a. Threatened, Endangered, and Sensitive Plants

Alternative 1

This alternative would result in no change to the existing situation.

Alternative 2

This alternative would result in no new impact. Hardening of damaged areas would help confine OHV use to single routes, thereby reducing the potential to impact sensitive plants.

Alternative 3

Development would only threaten sensitive species' populations if disturbance activities for route construction within the MOHVSA were located on or near populations identified during surveys or inventories yet to be completed.

Areas need to be surveyed to avoid T & E and sensitive plant populations.

Alternatives 4 and 5

Same as Alternative 3.

b. Other Vegetation

Alternative 1

This alternative would result in no change to the existing situation. It would delay the opportunity to rehabilitate 5 acres of eroded riparian area.

Alternative 2

This alternative would result in rehabilitating 5 acres of riparian area.

Alternative 3

This alternative would lead to both temporary and permanent loss of native plant life. Roads would generally remain devoid of vegetation. Amounts of vegetative disturbance would be directly related to the surface area involved. Increased dust levels along roadways and trails could be detrimental to vegetation.

The riparian areas would be the most adversely affected. Entrenchment of roads and trails would lower water tables, causing more mesic to xeric conditions. Since riparian zones are the most productive areas for wildlife, reducing riparian areas would cause a minimal reduction in wildlife numbers which are dependent on that area. Road corridors would be routed away from wetlands and riparian areas where possible.

Alternatives 4 and 5

Same as Alternative 3.

3. Wildlife

A mathematical model was used to analyze and display the impacts of route development and increased human access. The purpose of the model is to show relative differences in the various alternatives displayed in the environmental analysis and how these compare with pre-project conditions. The values should be viewed as an approximation of anticipated impacts. The model was reviewed prior to use in the geothermal EA and there was general agreement that the assumptions used were reasonable and that the

model was an appropriate means of approximating impacts. Its parameters seem appropriate to this OHV analysis.

The following is a discussion of the impacts to mule deer predicted by this model. Predicted impacts to other wildlife are presented in the next section of this report, "b. Other Wildlife."

Alternative 1

This alternative would maintain the existing wildlife habitat and current deer herd population within the MOHVSA.

Alternative 2

This alternative would have little or no impact on the existing wildlife habitat within the project area. Restriction to 4WD vehicles only would help to guarantee that existing habitat conditions would be maintained.

Alternative 3

If all of the subparts of this alternative were implemented, it would result in the construction of 5.8 addit onal miles of 4WD roads. The new roads would result in an additional 770 acres being impacted by roads and a loss of 350 acres of security area. It is predicted that there would be a 7% reduction in deer use within the project area.

The consequences of each sub-part of this alternative will be addressed individually.

Sub-part J

Realignment prior to construction, to follow a more direct route, would avoid riparian areas and impacts to spotted owl habitat. Construction of this route would result in an estimated 2% reduction in deer use.

Sub-part K

This route would result in a 3% reduction in deer use.

Sub-part L

This proposal would result in 200 acres less being impacted by roads than under existing conditions. This would allow deer use to increase by 1%.

Sub-part M
This proposal would not result in a significant amount of new acres being impacted by roads or a noticeable loss of security area. If this alternative is selected, necessary restrictions should be placed on the amount and location of any camping that is allowed to occur in currently undisturbed areas.

Sub-part N

This proposal would have little or no impact on the existing habitat.

Sub-part O

This portion would provide increased access to the area due to a net increase of .5 miles of road, with resultant heavier wildlife impacts.

Sub-part P

This alternative would result in an estimated 2% reduction in deer use within the project area.

Alternative 4

Based on the additional acres impacted by trails, there could be a 9% reduction in deer use within the MOHVSA.

Sub-part Q

It is predicted that there would be a 3% reduction in deer use within the project area; however, this loss may be much higher due to the loss of this key security area, the impact to the migration route, and the increase in recreational use within the project area.

Sub-part R

If this trail was eliminated it would result in 125 acres less being impacted by trails and an additional 160 acres of security area being available.

Sub-part S

The predicted 4% reduction in deer use would increase if the expected rise in motorbike use occurred.

Sub-part T

It is expected that there would be a 3% reduction in deer use within the MOHVSA. This loss could be much higher if migration corridors or key fawning habitat is impacted.

Alternative 5

The effects of this alternative would be the same as those under the specific sections of Alternatives 3 and 4 (Sub-parts J, L, M, N, P, and R).

Under this alternative, there would be a net increase of 1100 acres that would be impacted. This would result in a 5% reduction in deer use within the MOHVSA. Also, 1000 acres of security area would be lost.

b. Other Wildlife

Alternative 1

This alternative would maintain the existing wildlife habitat within the MOHVSA. Habitat capability levels for the management indicator species would be expected to stay at the 1986 level.

Alternative 2

This alternative would have little or no impact on the existing wildlife habitat within the project area.

Alternative 3

It is predicted that there would be impacts to snag-dependent species along the 4 miles of new roads within the open forest.

The consequences of each sub-part of this alternative will be addressed individually.

Sub-part J

This route will open up new areas to fuelwood cutting which would potentially impact snag-dependent species, goshawks, and spotted owls.

Sub-part K

A waterfowl habitat enhancement project will be constructed on the north side of Deer Island in the summer of 1987. The proposed route would be close to the pond on two sides, potentially impacting the effectiveness of the pond to provide nesting and brood rearing habitat for ducks.

Sub-part L

This proposal would place the loop road on the north side of the ridge and connect the existing dead-end roads. Nesting waterfowl utilizing the pond by Deer Island would be protected from disturbance by vehicles.

Sub-part M

This proposal would not result in a significant amount of new acres being impacted by roads or a noticeable loss of security area. If this alternative is selected, necessary restrictions should be placed on the amount and location of any camping that is allowed to occur.

Sub-part N
This proposal would have little or no impact on the existing habitat.

Sub-part O

This portion would cause heavier impacts than under existing conditions due to a net increase in mileage.

Sub-part P

This proposal would open up some new country to camping and firewood gathering which could impact goshawks and snag-dependent species.

Alternative 4

The loss of security area on the north and west side of the project area would result in the loss of potential habitat for Sierra Nevada red fox.

Sub-part Q

The section of Snake Creek adjacent to this route is one of the most productive waterfowl areas on the Forest. This trail would result in the continual disturbance to ducks nesting or raising broods in this area. A proposal has been submitted to the State to enhance the waterfowl habitat within this area. The existing and proposed routes would have a major impact on the Snake Creek riparian habitat's effectiveness in providing waterfowl nesting.

Sub-part R

The existing trail is causing considerable damage to riparian habitat. This is a marshy area that could potentially provide excellent nesting and brood rearing habitat for ducks. It would also eliminate disturbances to nesting waterfowl. Reconstruction of this trail would minimize the amount of sediment being produced where the trail crosses Snake Creek. Conversely, improvement of this trail could substantially increase motorbike traffic, thereby increasing the disturbance to waterfowl. This trail would severely limit the value of approximately .5 mile of Snake Creek in providing nesting and brood rearing areas for ducks.

Sub-part S

The west side of the MOHVSA is extremely important for species such as Sierra Nevada red fox which require low levels of human disturbance. The loss of 1200 acres of security area would also eliminate potential habitat for Sierra Nevada red fox.

Sub-part T

The loss of mule deer security area would also impact species that require low levels of human disturbance such as Sierra Nevada red fox.

Alternative 5

The effects of this alternative would be the same as those under the specific sections of Alternative 3 and 4 (Sub-parts J, L, M, N, P, and R). Prior to construction, surveys would be needed to determine where sensitive animal species occurred. Specifically, surveys for goshawks and spotted owls need to be conducted. If key areas are found, then route changes on the ground could be made to avoid impacts to these species. Due to the importance of riparian areas for wildlife, bypassing these zones would reduce impacts to wildlife

Ten acres of waterfowl habitat at the Broder trail crossing of Snake Creek would be eliminated from consideration for enhancement due to the close proximity of the trail.

Depending upon the final location of the Deer Island route, the impacts to waterfowl would change. The closer to the duck pond the road is, the more disturbance it would cause. If this route is located north of the ridge, little disturbance would occur.

Summers Ridge, Anderson Point, and the bench southeast of Kingfisher Stringer would be opened to woodcutting, potentially impacting spotted owl, goshawk, and snag-dependent species.

C. SOCIAL ENVIRONMENT

1. Access

None of the alternatives would have any effect on access to the MOHVSA.

2. Administrative and Special Use Areas

OHV activities that change physical characteristics which special use permittees seek would cause impacts to these permittees.

Alternative 1

This alternative would result in no change from the existing situation.

Alternative 2

Same as Alternative 1.

Alternatives 3, 4, and 5

Minor long term impacts to commercial filming activities, which require wide vistas and a primitive backdrop, may result from onsite or background disturbance.

3. Cultural Resources

Since the distribution of prehistoric remains is more or less even throughout the project area, the alternatives will be addressed by a general statement rather than with specific reference to sub-parts.

Alternative 1

The current level of collecting and vandalism would continue and perhaps increase as more 4WD roads and bike trails are constructed on the adjacent Sequoia National Forest, bringing more visitors to the general area. Sites currently located along trails would continue to be directly impacted by vehicular use.

Alternative 2

The current level of collecting and vandalism would continue. This alternative would not cause an increase of impacts over the level indicated for Alternative 1.

Alternatives 3 and 4

Vandalism and collecting would increase as more areas become accessible to vehicular traffic and more visitors are brought into the area.

Alternative 5

The current level of collecting and vandalism would continue; however, it is less likely to increase under this alternative as this alternative proposes less mileage of new construction than proposed in Alternatives 3 or 4. Current direct impacts to sites through vehicular use of existing routes would be alleviated.

4. Protection and Law Enforcement

The increased risk from fire would be a direct, short term and long term, unavoidable impact.

Alternative 1

This alternative would result in no change to the existing situation.

Alternative 2

Same as Alternative 1

Alternative 3

The potential exists for increased fire protection needs due to increased use.

Fire prevention patrols would need to be increased. The magnitude of risk would increase. More fire suppression equipment could be necessary. The use of air support for initial attack would need to be maintained.

The impacts to fire administration essentially would be fiscal, due to increased patrol and suppression costs.

Emphasis on new roads in the area could cause greater use, thereby creating a higher incidence of vandalism. To off-set the increase in vandalism, additional patrols of the area would be necessary.

Alternative 4

Same as Alternative 3.

Alternative 5

Type of impacts would be the same as Alternative 3 but the magnitude would be less due to less new route mileage and less use than Alternative 3.

5. Private Land

Impacts to private land resulting from development on Forest Service administered land under Alternative 3, 4, and 5 would be indirect, short and long term, avoidable and unavoidable.

Alternative 1

This alternative would have no affect on the private land.

Alternative 2

No effect above present.

Alternative 3

The private land could be affected indirectly by construction on adjacent federal land. Development could change scenic views, air and water quality, the overall feeling of remoteness, the recreational experience of landowners, the frequency of wildlife sightings, the quality of hunting and fishing opportunities, the relative value of the private land, and the level and frequency of noise.

There could be an increase in OHV traffic which could result in increased effects. Ambient use would not be expected to be much above present levels except for Sub-part O where the new route would move closer to private land and increase secondary effects such as noise and dust.

Alternative 4

This would be similar to Alternative 3 except that subpart T would cause the noise level to increase dramatically around the private land in Bakeoven.

Alternative 5

There would be little or no change from the present.

6. Range

Alternative 1

This would result in no change to the existing situation.

Alternative 2

This would result in little or no change to the existing. Cattle may experience some temporary disturbance from rehabilitation efforts.

Alternative 3

New activities, especially in areas where animals normally concentrate, would disturb livestock. Disturbance would result from OHV use and from construction activities. Livestock not already used to mechanical equipment may experience a loss in weight. Vehicle traffic in areas where livestock are grazing will be hazardous to livestock and vehicle occupants.

The removal of thermal cover and resting areas, by road or trail placement or by noise disturbance could result in the non-use of nearby meadows. Cattle could move into more marginal and remote areas. This displacement would force deer out and put grazing pressure on lightly used areas. There would be no change in grazing capacity.

Alternative 4

This is essentially the same as Alternative 3 with the exception on Subpart S and T. New routes in these areas may, at times, have a significant effect on cattle movements. OHV traffic could seriously prohibit cattle movement through parts of the area. This could be a short term effect which would occur only when OHV users were in the area. Also, in narrow stringers which are present near T, constant use of these areas could essentially eliminate cattle use in the meadow areas. Overall loss of grazing on the allotment would not occur, but it could put higher grazing pressure on other areas.

Alternative 5

This would be the same as Alternative 3 for all subparts.

7. Recreation

Alternative 1

Implementation of Alternative 1 would mean that the OHV opportunities lost with the establishment of wilderness would not be replaced. Therefore, as use on the Kern Plateau increases, the impacts on the remaining trails could also increase, as would vehicle trespass in wilderness.

Implementation of this alternative would continue the existing condition of the recreation resource and recreation opportunities in the short term. Recreationists would continue to use the area. OHV use would continue in its growth pattern due to the increasing popularity of this form of recreation. Each recreation activity listed in Table 4 would probably experience roughly the same percent of use increase. Assuming a continued increase in use in the long term, maintenance funding would slip further behind in keeping up with the workload. The Monache area would then lose a portion of its natural beauty. At the same time, the Forest Service would lose credibility in OHV and environmental management.

The semi-primitive recreation experience being sought would not be fully realized by those offended by a poorly designed and maintained OHV route system.

A valid assumption in discussions of use increases is that noise levels would increase proportionately with use increases. An off-setting effect is that noise emitted per vehicle might decrease due to quieter bikes being designed and produced, so that a certain amount of use increase might generate no additional overall noise. Also, bikes with 4-cycle engines instead of 2-cycle engines are the latest trend; this would help noise and trail wear problems in the future.

Alternative 2

This alternative would remedy the major problems predicted in Alternative 1 through proper rehabilitation of resource problem areas along existing routes.

A semi-primitive recreation experience would result from this alternative. As in Alternative 1, growth in the popularity of OHV recreation would cause overall use increases; increases in each recreation activity would grow comparably.

Where necessary, route-specific comments follow.

Sub-part A includes the ford at Snake Creek. Rehabilitation of this problem area is essential to ensure the continued accessibility of the entire Monache area.

When flooded, Sub-part B requires a very high-clearance vehicle to negotiate it. A lack of proper rehabilitation in the past has caused users to start new bypass routes, resulting in increased road scarring and meadow damage.

Alternatives 3, 4, and 5

The last three alternatives (#3, 4, and 5) would involve construction of new roads and trails. As a result of increased route mileage, use levels are likely to increase and the natural character of the land is likely to change. Both of these factors will have an influence on the type and quality of recreation experience offered in Monache. In an attempt to quantify the magnitude of these changes, two calculations have been made.

The first calculation is one of estimating use increases based on mileage of road or trail constructed. While one could argue whether or not use would increase due to factors such as system length and use dispersal, it seems appropriate to rely on the first-hand experience of Mike Mendoza. Mike is the Recreation Officer on the adjacent Cannell Meadow Ranger District of the Sequoia National Forest, is on the ID Team, and has a great deal of OHV experience. For planning purposes, he uses a rule-of-thumb of 25% increase in total vehicle use in an area for each 2 miles of new road or trail contructed. This projected use increase normally occurs within the first year after construction. In Mike's experience, each route has its own exact use increase, but he feels the

25% factor is a good average figure to use. This approach is obviously not totally accurate but it is useful as an estimation of use increases and has added applicability when all routes are measured and compared with this criterion. Tables 5, 6, and 7 below display the results of applying this formula. As in Alternatives 1 and 2, the mix of recreation activities comprising these increases would be expected to remain the same.

Table 5 shows the expected use increase for each road sub-part and for the entire Alternative 3. Sub-parts would increase use in the area an estimated 0 to 21% each. The entire alternative would increase use 61 to 72% depending on route selection at Deer Island.

TABLE 5

Alternative 3

Estimated Use Increase

Sub-Part	Sub-Part Length in Miles	Existing Route Miles Replaced	Net Change in Miles	% Increase in Use (estimated)
J: Summers Ridge	2.0	2.0	0	0
K: Deer Island #1[1]	2.2	.5	1.7	21
L: Deer Island #2[1]	.8	0	.8	10
M: Anderson Point[2]	1.4	.9	.5	6
N: Monache Meadow	3.2	1.8	1.4	18
O: South Fork	1.0	.5	.5	6
P: Kingfisher	2.5	.8	1.7	21
TOTAL[3]:	12.3/10.9	6.5/6.0	5.8/4.9	72/61%

1. Deer Island #2 would be .4 miles shorter if Sub-part N is constructed. Use increase for Deer Island #2 would then be 5%.

2. Anderson Point would be .2 miles shorter if Sub-part N is constructed. Use increase for Anderson Point would then be 4%.

3. Deer Island #1 and #2 would not both be constructed. First figure in each column represents alternative totals if Deer Island #1 is constructed. Second figure in each column represents alternative totals if Deer Island #2 is constructed.

Table 6 shows the expected use increase for each trail sub-part and for the entire Alternative 4. Sub-parts would increase use an estimated 6 to 44% each. The entire alternative would increase use 119%.

TABLE 6

Alternative 4

Estimated Use Increase

Sub-Part	Sub-Part Length in Miles	Existing Route Miles Replaced	Net Change in Miles	% Increase in Use (estimated)
Q: Summers Ridge to Deer Island	2.4	0	2.4	30
R: Broder Trail N. of Snake Creek	1.3	.8	.5	6
S: Monache Mountain[1]	3.5	0	3.5	44
T: Bakeoven[2]	3.1	0	3.1	39
TOTAL:	10.3	.8	9.5	119%

1. Assumes construction of Sub-part P (Kingfisher 4WD road). Otherwise, Sub-part S would be .3 miles longer and use would increase on additional 4%.

2. Assumes construction of Sub-part P (Kingfisher 4WD road). Otherwise, Sub-part T would be .3 miles longer and use would increase an additional 4%.

Table 7 shows the expected use increase for each route sub-part and for the entire preferred alternative (#5). Use increase by sub-part ranges from 0 to 21%, with the entire alternative increasing use by 61%.

TABLE 7

Alternative 5

Estimated Use Increase

Sub-Part	Sub-Part Length in Miles	Existing Route Miles Replaced	Net Change in Miles	% Increase in Use (estimated)
2B through I				
3J: Summers Ridge	2.0	2.0	0	0
L: Deer Island #2	.8	0	.8	10
M: Anderson Point	1.4	.9	.5	6
N: Monache Meadow	3.2	1.8	1.4	18
P: Kingfisher	2.5	.8	1.7	21
4R: Broder Trail	1.3	.8	.5	6
TOTAL:	11.2	6.3	4.9	61%

Since summer recreation use is heaviest on weekends and holidays, the estimated use increases of these tables would tend to occur at these same times. This would add a large influx of users to the area, especially on weekends and holidays. This would negatively impact the opportunity for semi-primitive recreation.

Recreation Opportunity Spectrum

The second calculation results from applying the Recreation Opportunity Spectrum system to analyze the anticipated impact that implementing each alternative would have on the existing mix of ROS classes. ROS was mapped at a scale of 1 inch = 1 mile to allow an overall view of the planning area. The draft Forest Plan requires an emphasis on semi-primitive nonmotorized and semi-primitive motorized ROS class activities and opportunities for the MOHVSA. Results of this mapping exercise are displayed in Table 8 below.

TABLE 8

Recreation Opportunity Spectrum
Acreage By Alternative

Alternative	Semi-Primitive Nonmotorized	Semi-Primitive Nonmotorized	Roaded Natural
1	7940	5510	0
2	7940	5510	0
3	7270	6180	0
4	3560	4730	5160
5	7340	6110	0

Alternative 1

This alternative represents a baseline for the MOHVSA divided into the semi-primitive nonmotorized (SPNM) (7940 acres) and semi-primitive motorized (SPM) (5510 acres) ROS categories, for a total of 13,450 acres. This is approximately 59 and 41% of the MOHVSA, respectively.

All three settings (physical, social, and managerial) are the same for the same piece of ground, so there exists no setting inconsistency.

Alternative 2

This alternative would cause no change in ROS classification. Thus, it is the same as Alternative 1 regarding ROS categories and acreage. No setting inconsistency would be expected.

Alternative 3

This alternative would represent an 8.5% decrease in the number of SPNM acres. There would be a 8.5% shift in acres from SPNM to SPM due to construction of new 4WD routes. This is the only change in physical setting. Depending on actual use increases due to increased system mileage, the social setting could change to Roaded Natural (RN) based on an increased frequency of contact on roads and in dispersed use areas. If this occurred, it would cause the managerial setting to also change to RN. This is due to the possible need to institute a permit or quota system to regulate the amount of use to keep it in tune with Forest Plan direction of emphasizing SPNM and SPM activities and opportunities. Since the physical, social and managerial settings would possibly not be the same, a setting inconsistency would be predicted. Then there would be a need for a decision to change one or more of these settings to make them all consistent for the area, or to manage the area with the projected

inconsistency to attain a specific management objective. As the latter would serve no purpose and would detract from the experience the recreationist is seeking, the setting inconsistency is undesirable and should be changed to conform to Forest Plan direction.

It should be realized that the projected setting would be most inconsistent during periods of heaviest use such as weekends, and least inconsistent during mid-week periods. This same type of use pattern led the Inyo National Forest to institute quotas at wilderness trailheads. It is known from that experience that use can be leveled somewhat throughout the week, although such a system can become costly.

A crucial need is to monitor use levels under the chosen alternative to determine when use levels exceed capacity of the area so that management can choose an action to protect the desired quality recreation experiences sought by the recreating public.

Alternative 4

This alternative represents a 55% decrease in SPNM acres and involves an ROS category change in about 33% of the total MOHVSA acres. As discussed in Alternative 3 above, social and managerial settings could change to RN. Such an undesirable change is most likely in this alternative, as its projected use increase is highest amongst Alternatives 3, 4, and 5 by a factor of almost 2 to 1. For that reason, Table 8 shows the acres lost in the SPNM category going into the RN category in this alternative only. These acres were calculated using a social and managerial map overlay. This alternative seems to be the most likely to substantially increase use in the area and to significantly change the existing character of recreation opportunity and activity in the area. A factor would be the large growth in motorbike trails from the present. The current pattern of day-riding in the area from camps on the Sequoia National Forest would start to change. Motorbike users would tend to start viewing Monache as a destination recreation area, that would include camping.

The neighboring Sequoia NF has noticed a similar trend of motorbike users creating dispersed camps at the end of roads where trail systems start. There has been a 200% increase in this use pattern over the last 2 years. This has caused a conflict with stock users by competing for their traditional camping spots. Sequoia NF personnel feel this phenomenon is a reaction of bike users to their own increased numbers at more developed camp sites.

Another factor in deciding to categorize ROS class changes as RN in this alternative is the high portability and high demand for motorbike trails. In 1985, a Stage II fire closure implemented only on the Sequoia NF resulted in approximately 1200 bikes utilizing Monache over the 4th of July weekend. A more normal 4th of July weekend would have involved an estimated 200-300 motorbikes.

Alternative 5

This alternative represents a 7.5% decrease in SPNM acres. As discussed in Alternative 3 above, the social and managerial settings could change to

RN. Like Alternative 3, it was assumed that the likelihood of a major shift of acres to RN was not great. Thus, acreages for RN were assumed to be zero.

8.Wild and Scenic River

Alternative 1

This alternative would create impacts on the Visual Quality Objective of retention for the scenic segment of this candidate Wild and Scenic River. Approximately 6 miles of existing OHV routes influence the river. A large portion of this distance violates the management direction for scenic segment that requires no OHV use closer than 100 feet from the river edge. These impacts would specifically be in Monache Meadow where multiple tracks and river crossings are evident within the 1/2-mile river corridor. The visual impact also occurs with multiple tracts existing near sub-part F. Therefore, this alternative would not meet the visual guidelines or management direction for this candidate river.

Alternative 2

Sub-parts C (Soda Springs Complex), D (Monache Meadow), and F (South Fork Meadow) of this alternative would remedy some of the visual impacts mentioned in Alternative 1 above, but would not meet the intent of the guidelines regarding routes adjacent to rivers. There would be no additional impacts of this alternative.

Alternative 3

Sub-parts K, N, and O are the only ones in the vicinity of the South Fork of the Kern River.

Sub-part K (Deer Island #1) would have its southern end within the half-mile wide river corridor. This is compatible with the direction of allowing limited road construction within scenic segments and allowing OHV use on designated roads and trails. However, it would not meet the Visual Quality Objective (VQO) of retention.

Sub-part N (Monache Meadow) would be within the river corridor for a short stretch of realignment. Again, compatibility with management direction is the same as for sub-part K above. However, it would not meet the VQO of retention.

Sub-part O (South Fork) would completely remedy the existing route's visual impact within the river corridor by elevating the route, moving it further from the river, and replacing the existing meadow stretch with a route generally screened by timber. Under this sub-part, the existing route and its visual impact would be obliterated.

Alternative 4

Sub-parts Q and T are the only ones in the vicinity of the South Fork of the Kern River.

Sub-part Q (Summers Ridge to Deer Island) would heavily impact the river corridor. It would involve a crossing in the main meadow that would not meet the VQO of retention. The river and meadow would be variety class A attractions. They are considered critical viewpoints and are the most sensitive areas visually. An additional visual consequence is that the motorbike's movement would tend to attract the viewer's attention.

Sub-part T (Bakeoven) would impact its eastern terminus near the ford at the South Fork. The impact would mainly be from increased noise due to increased use, since the route is well screened from the river and camping areas.

Alternative 5

Sub-parts C (Soda Springs Complex), D (Monache Meadow), F (South Fork Meadow), and N (Monache Meadow) are the only ones in the vicinity of the South Fork of the Kern River.

Sub-parts C, D, and F would remedy existing problems within the river corridor, would create no new impacts, but would not meet management direction of allowing OHV use at least 100 feet from the river edge.

Sub-part N would relocate around existing routes damaging meadow areas. These areas would be revegetated. It would be difficult to meet the VQO of retention.

9. Wilderness

Alternative 1

Under the present system of OHV routes, unauthorized off-highway vehicle use of wilderness trails creates negative impacts to wilderness users and values. These negative impacts are:

a. Opportunities for Solitude. Vehicle trespass decreases the wilderness value of solitude as the presence of more people, especially with vehicles, occurs.

b. Opportunities for Primitive Recreation. Vehicle trespass decreases opportunities for primitive recreation through impacts on openness of the area and concentrations of people.

c. Natural Integrity of the Area. This wilderness value decreases as a result of vehicular use of established hiking and equestrian trails or through cross-country travel.

d. Freedom from Sights and Sounds of Man's Activities. This value would be decreased even without vehicle trespass in wilderness. Existing legal vehicle use in Monache generates noise, dust, and visual impacts on adjacent wilderness areas. Vehicle trespass in wilderness would increase this negative impact through physical presence of the vehicle plus attendant noise and dust. An additional irritant to the wilderness user is the high speed at which motorbikes are often driven.

Increased law enforcement efforts would have to be provided in order to control the problem of vehicle trespass inside wilderness.

Alternative 2

Same impacts as Alternative 1.

Alternative 3

This alternative would substantially decrease unauthorized OHV use in wilderness by providing additional road miles to replace those that have been eliminated by wilderness designation.

These road segments would be designed to remedy user circulation problems at wilderness boundaries by providing loop roads where dead-ends currently exist. These loops would reduce vehicle trespass in the wilderness, thereby reducing negative impacts on wilderness values and users.

Sub-parts K and L

These segments would create loops at the area of greatest vehicle trespass in wilderness, which is on the north side of Deer Island.

Vehicle trespass in wilderness near the south end of Deer Island is less frequent. Construction of one of the proposed Deer Island loop roads would reduce this trespass problem.

Sub-part P

The area near Kingfisher Stringer has had some problems with vehicle trespass in wilderness. The proposed Kingfisher loop road (Sub-part P) would allow for a loop solution to the dead-end problem at Kingfisher Stringer while increasing OHV route mileage and opportunities. If vehicle access is allowed to the private land in Long Canyon, a gate and better signing at the existing road's junction with sub-part P would help alleviate existing user conflicts and decrease impacts on wilderness values.

Sub-part P would also provide a legal, alternate loop experience for motorbike users.

All other sub-parts not specifically mentioned above would have no direct impact on wilderness values or users.

Alternative 4

This alternative would decrease unauthorized OHV use in wilderness by providing additional trail miles to replace those that have been eliminated by wilderness designation. User conflicts and law enforcement efforts would be reduced.

Sub-part Q

This segment would provide a large-scale loop that would reduce vehicle trespass problems on the north and south sides of Deer Island by allowing bikes to exit the Monache Meadow area to the southwest of Deer Island. The largest negative impact on wilderness would be the estimated 30% use increase generated by this segment. Given prevailing westerly winds and good visibility, noise and dust coming from use of this route would drift eastward and produce evidence of the sights and sounds of man in the South Sierra Wilderness, notably along the Pacific Crest Trail.

Sub-part R

Construction of this trail, coupled with closure of the bike trail on the Sequoia National Forest along Snake Creek leading to Beck Meadows, would assist the Sequoia National Forest through construction of a loop trail. This would reduce current motorbike trespass northeast of Broder Meadow. Negative impact on wilderness values would be reduced. The 6% estimated increase in use is probably low for this segment, as it would be a key bike link and replaces an existing trail with a very wet crossing that most users don't attempt.

Sub-part S

Construction of this segment would impact wilderness values by increasing noise intrusion into the wilderness due to the prevailing westerly winds. Noise tends to carry further when generated on a raised surface such as Monache Mountain and especially when Monache Meadow offers no vegetative barrier to absorb the sound. Solitude values would also decrease as noise and dust from bikes is perceived by wilderness users. This segment is designed to increase OHV opportunities and not solve any dead-end problems with loops.

Sub-part T

Construction of this trail would create several impacts to wilderness values and users. The route would cross the Schaeffer Trail at right angles less than 2 miles from the wilderness boundary. Vehicle trespass in wilderness would be expected to increase sharply. Noise and dust impacts on nearby wilderness would increase. This would detract from opportunities for solitude and primitive recreation and the natural integrity of the area.

Alternative 5

This preferred alternative would have fewer impacts on wilderness due to its containing only certain sub-parts from Alternatives 2, 3, and 4.

All selected sub-parts from Alternative 2 would have no negative impact on wilderness users or values, as these segments deal with rehabilitation of existing route problems. They would collectively have a positive impact on the ability of wilderness users to access wilderness trailheads in Monache by vehicle more easily.

Sub-parts L, P and R have already been addressed above. The environmental consequences of these two segments would be the same as listed in Alternative 3. Sub-parts J, M, and N would not have any impact on wilderness use or values.

10. Socio-Economic

a. Economic Environment

Alternative 1

This alternative would produce no change to the existing economic situation in Inyo and Kern Counties other than the modest stimulation of local economies through the expected slow increase in popularity of OHV recreation.

Alternative 2

Same as Alternative 1.

Alternative 3

The projected increase in OHV use under this alternative would cause a direct, positive effect on the local economy. This translates to more recreationists being in the area, purchasing local goods and services.

Alternatives 4 and 5

Same as Alternative 3.

b. Social Environment

Alternative 1

This alternative would represent no change in current resource use. Thus, it would have no effect on the three major social groups (long-term residents, seasonal recreationists, and Native Americans).

Alternative 2

Same as Alternative 1.

Alternative 3

Long-term residents would be impacted by the increased use levels resulting from increased system mileage. Some of this group would be favorably impacted, seeing their personal recreational opportunities expanded as the OHV system grows. Expansion of use would also bolster the local employment picture.

Other long term residents would be negatively impacted by the growth in system mileage and use. This would represent a threat to the rural lifestyle and rugged "frontier" feeling currently existing in the MOHVSA.

Seasonal recreationists would be impacted by the larger system of OHV routes under this alternative. For some, the impact would be positive and would represent a better fulfillment of their recreational expectations.It would be aligned with their seeking a semi-primitive recreation experience oriented to four wheel drive use. Their support would generally decrease proportionately to any decline in visual quality of the area. The restricted type of access and natural characteristics of the area are major factors in attracting these recreationists to the area.

For others, the impact would be negative. These are "primitive" oriented recreationists who value the area the way it currently is, without an increase in route mileage or use. They would be negatively impacted if mileage and use were to increase. A negative impact to all recreationists would be the continuing access problem through mud holes and meadow areas that are often not driveable.

Native Americans would generally be negatively impacted by this alternative. This would result from further physical impacts on the forest, a change in traditional use levels, and lack of rehabilitating existing damaged areas. This impact might be negated if the Native American community could be shown that the impacts on the forest when new routes were constructed would create a loop experience for users and decrease vehicle trespass in wilderness.

Alternative 4

The impacts of this alternative on key social groups would be the same as Alternative 3 with the following exceptions:

Those long term residents already negatively impacted by Alternative 3 would be more negatively impacted by Alternative 4. This is due to higher vehicle speeds where proposed routes are intended for motorbike use only.

Seasonal recreationists might be less favorably impacted under this alternative where new routes are designed for motorbike use only. This might be perceived as additional route mileage being created for a small segment of users at the expense of tranquility and visual quality of the area. Also, the fact that the most proposed bike routes do not generally solve dead-end problems might become an issue.

Native Americans, as in Alternative 3, would be negatively impacted. The magnitude of this impact would increase as motorbike routes were constructed instead of routes for the more traditional 4WD. Another factor would be that new motorbike trails are generally proposed for additional OHV opportunities and not to solve dead-end problems.

Alternative 5

The impacts fo this alternative on key social groups would be the same as Alternative 3 with the following exceptions:

The magnitude of positive and negative impacts on long term residents would decrease since route mileage and use increases would be less than in Alternative 3.

Seasonal recreationists would also perceive a lower magnitude of positive and negative impacts since this alternative has lower mileage proposed and would create a lower level of use increase than Alternative 3. A major, positive impact for this group would be the reconstruction of existing routes to allow orderly OHV travel.

The scope of impacts on Native Americans would remain the same. The one positive aspect of this alternative over Alternative 3 would be the reconstruction of existing routes through damaged areas. This action would align with the Native Americans' value of favoring protection of the forest.

D. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

If the preferred alternative is selected, there will be irreversible losses of the following resources: 1) cultural resources - it must be noted that this loss will occur any place where a person discovers an artifact and decides to collect it. In fact, people on foot are more likely to discover small artifacts than are people in vehicles. However, there is some physical destruction of artifacts through vehicle use, and the ease of access afforded by vehicles will allow more people to be in more places where sites and artifacts will be discovered. 2) Any presently unknown non-renewable scientific resource which is damaged or destroyed could be an irreversible loss. 3) There will be irreversible loss, through use, of the fossil fuels used by vehicles.

There will probably be some irretrievable losses of soils, vegetation and wildlife habitat due to vehicle use. It is expected that such losses will be small and within acceptable limits. If losses appear to be getting greater than is acceptable, management techniques would be employed to stop and reverse the damage.

There should be no losses of such non-renewable resources as known rare, threatened or endangered plants or animals, minerals, or wilderness.

E. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Controlled OHV use is an acceptable form of rercreation, but indiscriminate use off established routes can be detrimental to the environment and welfare of National Forest users in certain locations and situations. The long-term productivity on these National Forest lands can be maintained by identifying those areas and trails that can accommodate this type of use. The effects of OHV use will be monitored to provide the basis for recommending actions and controls needed for environmental protection. This will assure that long-term productivity will be maintained.

F. UNAVOIDABLE IMPACTS

The unavoidable adverse effects which would result from implementation of the preferred alternative are primarily those detrimental physical effects which are caused by vehicle use. There will be some soil erosion and compaction; stream siltation and pollution; damage and destruction of vegetation; adverse impacts to wildlife from harassment, destruction of burrows, etc.; wildfire hazard; damage and vandalism of cultural resources; degradation of natural scenery; air pollution; noise; damage to scientific and educational resources; conflicts between vehicle users and non-vehcile users; conflicts with grazing; and use of fossil fuels.

In addition to the amount of adverse effects of vehicle use which would remain, there would be some additional adverse effects generated. More signs would be needed, somewhat increasing visual pollution. More enforcement would be required. There would be more road maintenance needed. Both of the last two items would involve increased expenditures, or at least diversion from other uses.

As more vehicle routes are brought under maintenance, there would be a loss of challenging routes for OHV users. There would be more use on the vehicle routes which may result in crowding and in some cases safety hazards for the vehicle users.

V. CONSULTATION AND COORDINATION

A. List of Preparers (Interdisciplinary Team)

Charlie Robinson	Team Leader/District Recreation Officer
Ernie DeGraff	Assistant Forest Recreation Officer
Ralph Giffen	District Resource Officer
Robin Hamlin	District Wildlife Biologist
Del Hubbs	District Fire Prevention Technician
Mike Mendoza	Cannell Mdw. R.D. Recreation Officer

B. List of Reviewers

All ID Team members were reviewers of this report. Additional reviewers were Jim Arasim, District Ranger of the Mt. Whitney Ranger District, and Rod Ellis, Assistant Recreation Officer of the Mt. Whitney Ranger District.

VI. REFERENCES

1. Archaeological Reconnaisance Report for Monache Green Sticker Project, Inyo National Forest, 1986. Report #05-04-388.

2. Blackrock Mountain and Beach Ridge Trail Construction Environmental Assessment, Cannell Meadow Ranger District, Sequoia National Forest, 1985.

3. Draft Environmental Impact Statement and Proposed Forest Land and Resource Management Plan, Inyo National Forest, 1986.

4. Environmental Assessment of Access to Long Canyon (draft), Inyo National Forest, 1985.

5. Environmental Assessment of Geothermal Leasing on Portions of the Mount Whitney District, Inyo National Forest, and Cannell Meadow District, Sequoia National Forest, 1985.

6. Environmental Assesment of Motorcycle Loop Trail Project, Placer County, California, Foresthill Ranger District, 1984.

7. Environmental Analysis of Off-Road Vehicle (ORV) Use on Trails and Lands Within The Six Rivers National Forest, 1977.

8. Golden Trout Wilderness Management Plan, Inyo and Sequoia National Forests, 1982.

9. Guide to Off-Road Motorcycle Trail Design and Construction, A. by Joe Wernex. American Motorcyclist Association, 1984.

10. Mendoza, Mike. Recreation Officer on Cannell Meadow Ranger District, Sequoia National Forest. Personal communication. 1986, 1987.

11. Off-Road Vehicles on Public Land. Council on Environmental Quality, 1979.

12. Off-Road Vehicle Study. Inyo National Forest. 1973.

13. Off-Road Vehicle Use: A Management Challenge. Ed. by Richard Andrews and Paul Nowak. 1980.

14. ROS Book, 1986. USDA Forest Service. 1986.

15. ROS Maps, Inyo National Forest. 1982.

16. Vehicle Use Plan, Environmental Analysis Report, Inyo National Forest. 1977.

17. Visual Management System, Vol. 2, Chapter 1. UDSDA. 1974.

APPENDICES

APPENDIX A

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
Office of Off-Highway Motor Vehicle Recreation

1:67 (71)

APPLICATION FOR STATE OFF-HIGHWAY VEHICLE GRANT OR-2-I-13

DATE OF THIS APPLICATION May 15, 1985

PROJECT TITLE: *(Be brief & concise)*

MONACHE - Phase One

PROJECT COST: $235,192

APPLICANT: *(Name and address)*

Inyo National Forest
Mt. Whitney Ranger District
P.O. Box 8
Lone Pine, CA 93545

PROJECT LOCATION:

Nearest City Kernville

County Tulare

Describe Access to Project:

West access: Sherman Pass Road from Kernville to Blackrock Work Center to Monache Jeep Road turnoff.

East access: Nine Mile Canyon from Highway 395 to Blackrock Work Center to Monache Jeep Rbad turnoff.

STATE POLITICAL JURISDICTION NUMBERS

Senate District No. 15

Assembly District No. 32

APPLICANT'S AUTHORIZED REPRESENTATIVE:

Eugene E. Murphy	Forest Supervisor	(619) 873-5841	
(Name)	*(Title)*	*(Area Code)*	*(Phone)*
Rod Ellis	Asst. Recreation Officer	(619) 876-5542	
(Person with day-to-day responsibility for project)	*(Title)*	*(Area Code)*	*(Phone)*

DESCRIPTION OF PROJECT *(Include proposed facilities, type of O.H.V. activity accommodated, how project will benefit O.H.V. users, etc.)*

Monache has a long history of 4WD use but it is only until recent times, after new road construction opened up large portions of the northeastern Sequoia National Forest to easy vehicle access, that Monache's relative remoteness from the outside world ended and it became a favored destination for many OHV users.

Existing 4WD trails in Monache were never meant to absorb heavy use impacts. Causeways built for the occasional traveler in the past are now in need of reconstruction. Portions of trail, which cross sensitive wet meadow areas need rerouting. Some trails, which afforded OHV visitors access to destinations east and southeast of Monache, are now part of the new South Sierra Wilderness. Many 4WD and bike trails are dead-ended at wilderness boundaries.

This proposal, Monache-Phase One, allows for the reconstruction of approximately 12 miles of 4WD and bike trail to mitigate existing resource damage and allow for orderly, progressive OHV travel. Improvements would include reroutes, causeway construction, and culvert installations. Two to four miles of new 4WD trail would eliminate dead ends resulting from or existing prior to new wilderness boundaries.

(contd.)

DEVELOPMENT PROJECTS

Land Tenure – Project land is: 13,450 acres:

13,450 owned in fee simple by applicant

_____ available under a ____ year lease

_____ other interest (explain) _____

ACQUISITION PROJECTS

Project land will be: _____ acres:

_____ acquired in fee simple by applicant

_____ acquired in other than fee simple (explain)

SIGNED: Eugene E. Murphy May 17, 1985
(Applicant's Authorized Representative) *(Date)*

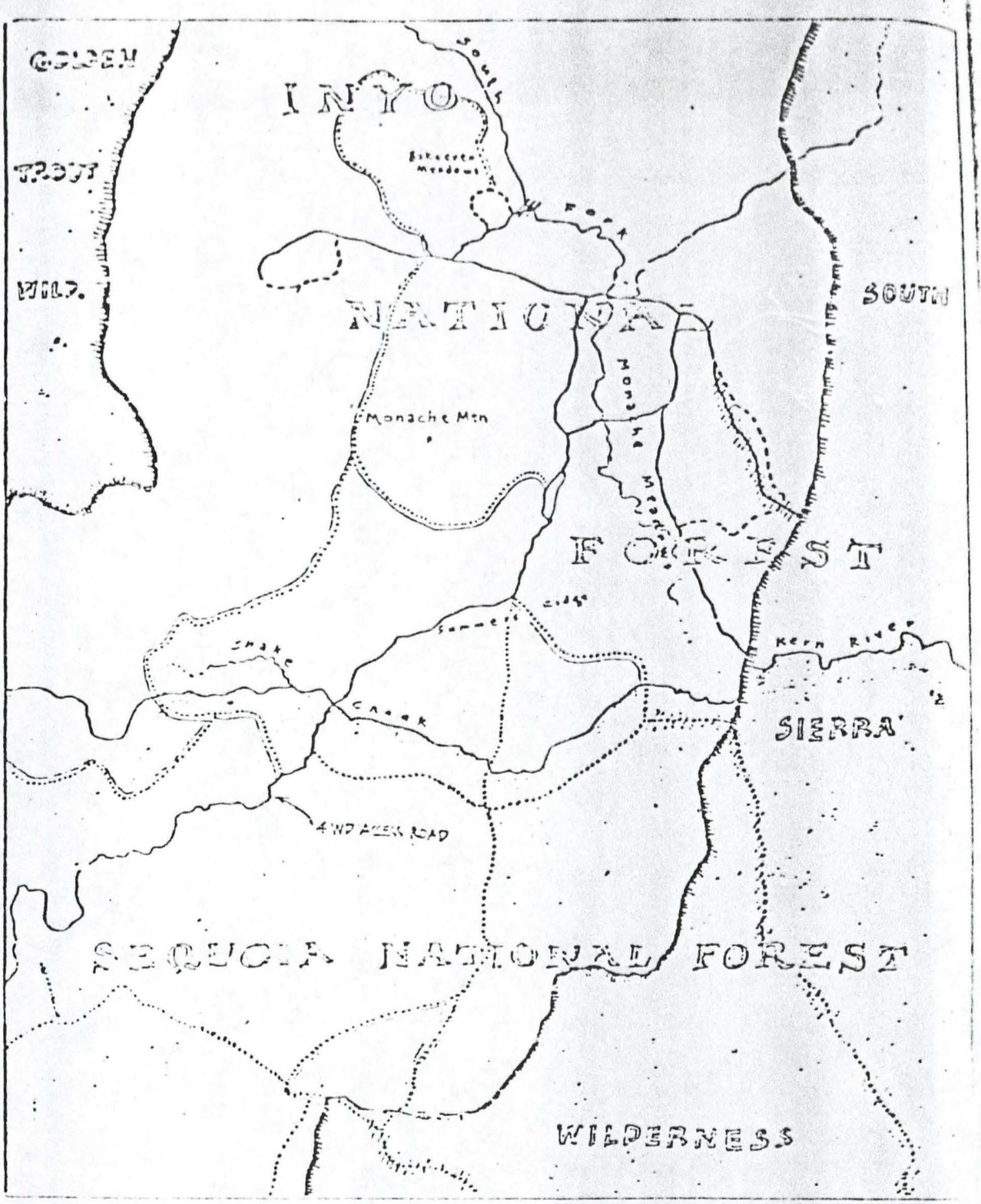
New bike trails, totaling perhaps 7 miles, would further address the dead end problem and the potential new resource damage and/or trespass into adjacent wilderness. Whenever feasible, the new work would tie into existing or proposed trails on the Sequoia. Self-service information stations plus directional and regulatory signing would round out the system. Trail sections eliminated by reroute or wilderness designation would be restored to a pre-use condition.

NEPA Compliance/Cultural Resource Protection: Portions of Monache are critical deer habitat. It is a major deer holding area and contains key fawning habitat and deer migration routes. The area is rich in archaeological sites. The impacts of any expanded OHV facilities demand careful study and planning. Providing for environmental issues and concerns and any necessary archaeological testing/mitigation efforts are a part of this funding request.

Letter of support from MAC on file with DPR.

MONACHE PROJECT - PHASE ONE
COST ESTIMATE

1.	Reconstruct approximately 12 miles of existing 4WD trail 12 miles @ $2500 per mile =	$ 30,000.
2.	Construct 2 to 4 miles of new 4WD trail 3 miles @ $10,000 per mile =	30,000.
3.	Construct approximately 7 miles of new bike trail 7 miles @ $8,000 per mile =	56,000.
4.	Restore eliminated trail sections	10,000.
5.	Provide directional and regulatory signing 35 signs @ $120 each =	4,200.
6.	Provide self-service information stations 1 @ $2500 each = 2 @ $2000 each =	2,500. 4,000.
	SUB-TOTAL, Items 1 thru 6:	$136,700.
7.	Environmental Assessment	$ 10,000.
8.	Cultural Resource Testing/Migigation	10,000.
9.	Mobilization, 10% x $136,700. =	13,670.
10.	Project Design and Visual Input	12,000.
11.	Construction engineering, review and inspection 23% x $136,700 =	31,441.
	TOTAL, Items 1 thru 11:	~~$213,811.~~
	Ten percent inflation factor based on 1987 start up date 10% x $213,811 =	21,381.
	TOTAL REQUEST, MONACHE PROJECT, adjusted for inflation:	$235,192.



MONACHE PROJECT

Existing 4WD & Bike trails are approximations only. Proposed 4WD or Bike trail routes may vary in reality.

— 4WD EXISTING
--- 4WD ADDITIONS OR REROUTE
//// 4WD ELIMINATE

···· BIKE ROUTE EXISTING
---- BIKE ROUTE PROPOSED
//// BIKE ROUTE ELIMINATE

MANAGEMENT PRESCRIPTION # 8 - WILD AND SCENIC RIVERS

The purpose is to maintain classified or designated rivers in a free-flowing condition, as described in the Wild and Scenic Rivers Act of 1968, as part of the national wild and scenic rivers system.

Emphasis is on scenic, recreation, geologic, fish and wildlife, vegetation, and cultural values for the enjoyment of present and future generations.

Segments of inventoried and candidate rivers on the Inyo National Forest are the North Fork of the Kern River, the South Fork of the Kern River, and the Middle Fork of the San Joaquin River.

This prescription applies to the recommended status of river segments within a linear strip averaging one-quarter mile wide on each side and paralleling the river.

Element	Management Direction
Visual	Recreation Segment: Meet VQO level as inventoried.
	Scenic Segment: Meet VQO level of retention.
	Wild Segment: Meet VQO level of preservation.
Recreation	Cooperate with adjacent National Forests in the wild and scenic river designation process.

Recreation Segment

Allow the range of recreation activities included in ROS classes primitive, semiprimitive nonmotorized, semiprimitive motorized, and roaded natural. allow ORV use on designated roads or trails only; allow no open area ORV use.

Provide for camping at designated sites only.

Scenic Segment

Allow the range of recreation activities included in ROS classes primitive, semiprimitive nonmotorized, semiprimitive motorized, and roaded natural. allow ORV use on designated roads or trails only; allow no open area ORV use.

Provide for recreation in a near-natural setting while allowing other compatible uses.

Allow camping and off-road vehicle use at locations no closer than 100 feet from the river edge.

Wild Segment

Allow the range of recreation activities includedin ROS classes primitive and semiprimitive nonmotorized. Allow no ORV use.

Provide for recreation in a primitive setting which offers considerable physical challenge and requires well-developed outdoor skills.

Allow camping at locations no closer than 100 feet from the river edge.

Provide access by trail only and for nonmotorized uses.

Increase public awareness and understanding of the management direction for wild and scenic river segments through use of brochures and signs located outside the area.

Energy

Recreation, Scenic, and Wild Segments

Permit no hydroelectric development, impoundment, or diversion.

Facilities

Allow limited road construction within recreation or scenic segments; disallow roads within wild segments.

Allow trails and trail bridges within all segments.

Fisheries

Protect and improve golden trout habitat.

Lands

Acquire nonfederal land and easements to implement the Wild and Scenic Rivers Act and to facilitate management of other resources.

Ensure legal access to nonfederal land not acquired.

Permit no utility rights-of-way within wild segments.

Permit utility rights-of-way within recreation and scenic segments when there are no alternatives.

Minerals

Recreation, Scenic, and Wild Segments

Identify and determine validity of all mining claims on public lands when a plan of operations is submitted.

Allow mineral (including geothermal) leasing, exploration and development where accomplished without surface occupancy of the average one-quarter mile wide strip on either side of the river; this does not preclude crossing the strip with linear facilities at designated locations.

Permit no sales or extraction of common variety minerals.

Wild Segment

Allow no mineral (including geothermal) leasing, exploration or development.

Permit no sales or extraction of common variety minerals.

Protection

Recreation and Scenic Segments

Control all wildfire and use a technique of fire suppression that minimizes landscape alteration and ground disturbance.

Wild Segment

Use the fire suppression strategies of confinement, containment, or control. Use confinement or containment with a 50-acre objective for all lightning-caused fires under intensity levels 1 through 5 and contingency levels 1 and 2 unless life, property, or high resource values are threatened. Control all human-caused fires.

Range

Recreation and Scenic Segments

Permit grazing.

Permit existing structural improvements.

Permit expansion of structural improvements outside designated wilderness provided they meet assigned VQOs and allow for user access.

Wild Segment

Permit grazing.

Limit structural improvements to those which exist.

Riparian

Protect river and river banks and the plants and animals dependent on these areas from alteration.

Timber	Recreation and Scenic Segments
	Limit timber harvest to maintain or enhance user safety and scenic quality.
	Allow timber stand improvement and reforestation as necessary to maintain or enhance the health and vigor of the stand.
	Wild Segment
	Disallow timber harvesting.
	Disallow timber stand improvement and reforestation.
Watershed	Allow no modification of soil or watercourses except to restore damaged areas to a natural state.
	Control or prevent erosion.
Wilderness	Incorporate both wilderness and wild and scenic river management where a classified river segment extends into designated wilderness. Apply the most restrictive requirements.

MANAGEMENT PRESCRIPTION # 17 - LIMITED ACCESS

The purpose is to limit vehicular access to protect and maintain recreation and/or wildlife values. This will not preclude mining roads under permit for the life span of need.

Emphasis is on maintaining the limited access or "unroaded" characteristics of certain lands.

This prescription applies to inventoried roadless lands with identified dispersed recreation and/or wildlife values.

Element	Management Direction
Facilities	Limit two-wheel drive roads to those necessary for mineral development and current use. Do not upgrade four-wheel drive roads to two-wheel drive roads except for mineral development purposes. Close new mining roads to public access; obliterate such roads after they are abandoned.
Protection	Apply the fire suppression strategies of confinement, containment, or control. Favor the containment and confinement strategies for lightning-caused fires unless life, property, or high resource values are threatened. Control all human-caused fires.
Range	Allow range enhancement activities to the extent they are compatible with recreation and wildlife objectives.
Recreation	Dispersed Recreation: Manage land to maintain ROS classes of primitive, semiprimitive nonmotorized, semiprimitive motorized, and roaded natural. Manage recreational and scenic opportunities to maintain or enhance their values. Provide for trail access consistent with management objectives for the area and ROS class applied. Allow ORV use only on designated roads and trails. Develop no additional permanent, public, two-wheel drive access. Developed Recreation: Allow newly developed recreational facilities in limited access areas consistent with a primitive, semiprimitive nonmotorized, semiprimitive motorized, or roaded natural ROS class.
Timber	Manage timber so as not to impair recreation, wildlife, and watershed resource values.

Visual Resources	Meet or exceed the VQO of retention. Do not exceed visual condition class III with land disturbing activities without an approved environmental analysis.
Wildlife	Maintain high habitat effectiveness in key fawning areas, winter range, holding areas, and key migration routes.
	Manage vegetation on key wildlife areas for proper forage-to-cover ratios.
	Improve riparian areas where necessary to enhance fawning habitat.

MANAGEMENT AREA # 20 - SOUTH SIERRA

Management Prescription (Rx) Allocation

Number	Name	Net NFS* Acres
Rx 1	Designated Wilderness	29,879
Rx 4	Mule Deer Habitat Emphasis	27,614
Rx 8	Wild and Scenic Rivers	(2,288)**
		2,624
Rx 15	Developed Recreation Site	(6)***
		14
Rx 17	Limited Access	15,340
	Total	75,471

*National Forest System
**Included in designated wilderness acreage
***Included in wild and scenic rivers acreage

Management Area Direction

Range

- Permit cattle entry on or about June 25, but make every effort to avoid encroachment of known fawning areas through mitigating measures shown in individual grazing allotment plans. Amend allotment plans to include needed mitigating measures.

Recreation

- Refer to the Monache off-highway vehicle plan ("Green sticker" off-highway vehicle grant application dated May 15, 1985) for managing ORV use where the Limited Access Management Prescription is applied to a portion of Monache Meadows. The application outlines the following action:

  reconstruction of approximately 12 miles of 4WD and bike trails to mitigate existing resource damage and allow for orderly, progressive OHV travel;

  installation of runoff and erosion control improvements including reroutes, causeways, and culverts;

  construction of two to four miles of new 4WD trails to bypass and eliminate deadends of old trails at the boundary of the newly designated South Sierra Wilderness;

  tying to existing or proposed trails on the Sequoia National Forest where feasible;

  restoration of abandoned trail sections to a pre-use condition;

  installation of self-service information stations, and directional and regulatory signs.

- Emphasize semiprimitive nonmotorized and semiprimitive motorized ROS class activities and opportunities for Rx areas #8 and #17 in the Monache Meadows area. Develop an ORV plan to include capacity, ROS class designation, and limited overnight camping facilities to maintain a quality level of use with minimal resource damage.

Wild and Scenic Rivers

- Maintain the existing wild and scenic attributes of the South Fork Kern River and allow no activities that would preclude this candidate river from wild and scenic designation.

- Recommend segments 4 and 6 for the "wild" category, and segments 3 and 5 for the "recreation" category. This is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States. Final decisions have been reserved by the Congress to designate rivers to the National Wild and Scenic Rivers System.

APPENDIX C

United States Department of Agriculture | Forest Service | INYO NATIONAL FOREST | Mt. Whitney Ranger District
P. O. Box 8
Lone Pine, CA 93545

Reply to:

Date: July 29, 1986

Dear Friends of Monache:

The Mt. Whitney Ranger District of the Inyo National Forest recently received a grant for the Monache Meadows area of eastern Tulare County in California. The grant request was prompted by the passage of the California Wilderness Act of 1984, which released Monache for multiple-use management, and the need to correct resource damage on existing vehicle routes. This grant is funded through the State of California Off-Highway Vehicle Green Sticker Program. This program channels receipts from registration of off-highway vehicles for performance of resource protection work on existing routes and enhancement of off-highway vehicle opportunities.

The purpose of the grant are:

1. Reconstruction of portions of the existing four wheel drive (4WD) and motorbike trails to mitigate or minimize existing resource damage and allow for orderly off-highway vehicle (OHV) travel;
2. Construction of new 4WD roads to eliminate dead ends created by wilderness boundaries and avoid wet meadows where routes now exist.
3. Construction of new motorbike trails to eliminate dead ends created by wilderness boundaries and to create additional OHV opportunities.

The first step is completion of an environmental analysis to determine what facilities and activities are appropriate to manage off-highway vehicle use in the Monache area. As a person interested in the Forest Service management of the Monache Meadow area, you are being contacted to ask your assistance in identifying public issues involved in the activities listed above. The enclosed map of the area depicts the current transportation system of vehicle roads and motorbike trails. The map also shows proposed additions to OHV routes. Feel free to add, delete, or change the location of any of these routes to reflect your thoughts on this matter. Please distinguish between bike trails and 4WD routes. Your comments may either be site-specific or general but your thoughts on why you are modifying, adding or deleting routes would be helpful.

We would appreciate hearing from you no later than August 2;, 1986 but an earlier reply would be appreciated. This will allow for timely inclusion of your comments into the environmental analysis process.

Please send your comments to:

Mt. Whitney Ranger District
Attn: Charlie Robinson, Recreation Officer
P. O. Box 8
Lone Pine, CA 93545

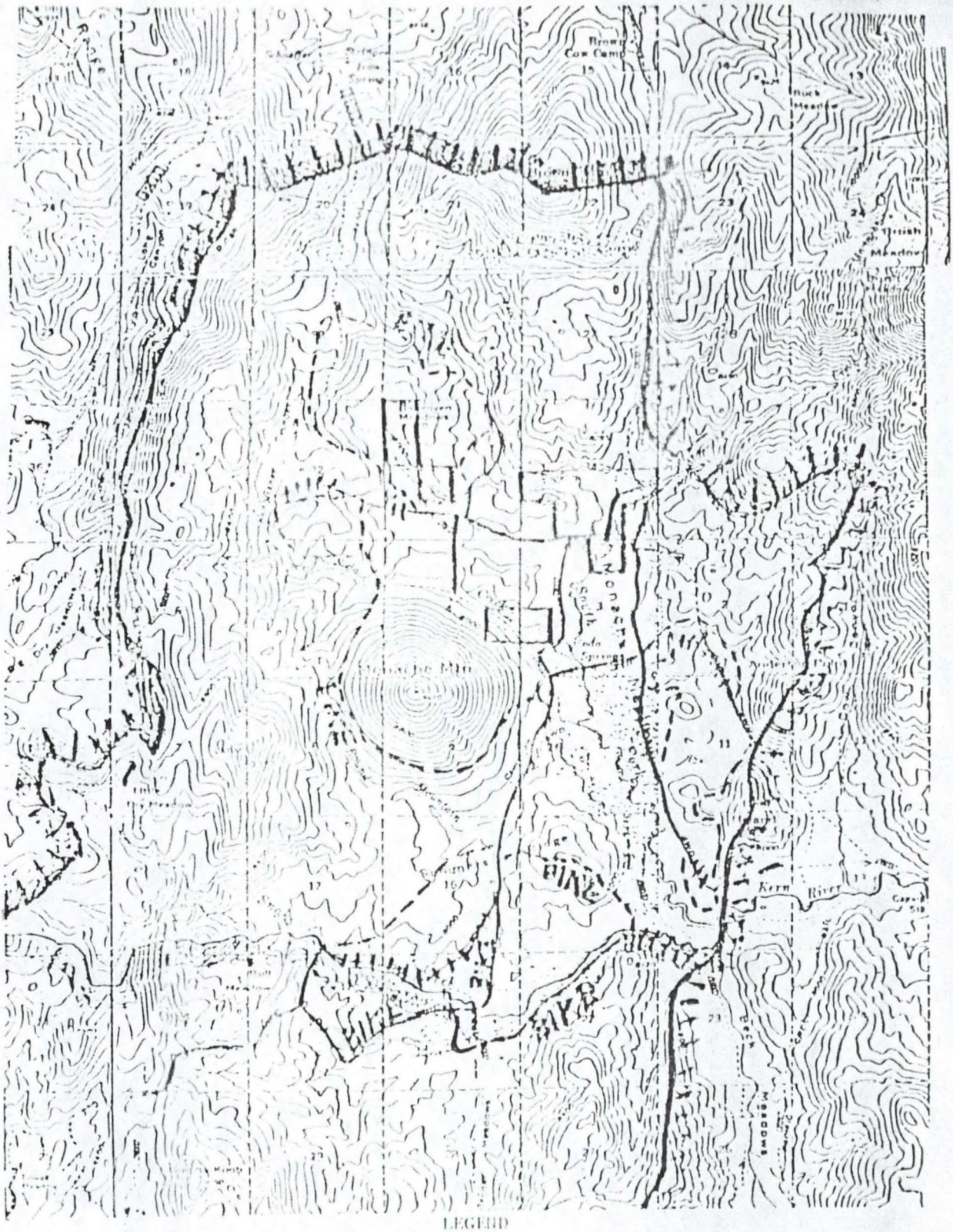
Before the fact, your participation and input is appreciated.

Sincerely,

James Arasim
JAMES E. ARASIM
District Ranger

enclosure

MONACHE AREA TRANSPORTATION SYSTEM



LEGEND

WILDERNESS BOUNDARY

EXISTING ROAD OR TRAIL

PROPOSED ROAD OR TRAIL

EXISTING HIKER/HORSE TRAIL

OBLITERATE ROAD OR TRAIL

PRIVATE LAND

All roads open for ATV and motorbike except where labeled "BIKE," in which case

APPENDIX D

SPECIFIC PUBLIC COMMENTS

No. of Comments	Comment
4	Opposes all OHV use in Monache
2	Forbid all motorbike use
4	Opposes all new 4WD roads and trails
4	Opposes all new 4WD roads
8	Opposes all new bike trails
1	Opposes closing certain roads and creating new rds/trails
40	Opposes Monache Mtn. & Bakeoven bike trails
1	Opposes Monache Mtn. bike trail
2	Opposes Bakeoven bike trail
3	Opposes Summers Ridge East bike trail
3	Opposes Deer Island road
3	Opposes Kingfisher road
2	Opposes Summers Ridge road
1	Opposes South Fork road
1	Opposes Broder Trail north of Snake Creek
11	Opposes all routes east of S. Fork
1	Supports Bakeoven East rehab
5	Supports Kingfisher Stringer rehab, including gate
1	Supports Summers Ridge re-route
1	Supports Anderson Point re-route
1	Supports opening road to Schaeffer fish barrier
2	Supports Deer Island #2
1	Supports new road from Snake Cr. to Kingfisher
1	Supports Bakeoven bike trail
2	Supports new bike trail from Snake Cr. to Kingfisher
1	Supports bike trail from Snake Cr. to Deer Island
1	Supports moving SW end of Bakeoven bike trail further east
16	Supports rehab of all damaged areas
8	Supports obliteration of vehicle routes inside wilderness
2	Supports re-route of Long Cyn. road inside wilderness
2	Supports cooperative policy regarding safe Long Cyn. access
5	Supports construction of new road and trail loops to eliminate dead-ends at recent wilderness boundaries
1	Supports rehab of exiting 4WD roads
3	Supports construction of new 4dWD roads
1	Supports closure of all trails not maintainable to prevent resource damage
1	Supports phasing out OHV use in Monache and designation as wilderness

1	Supports existing 4WD use
1	Supports rerouting roads out of wet meadows
1	Supports improvement of some 4WD rds. w/ heavy bike use
23	Supports opening trails in the open where wildlife habitat is not disturbed and patrols are easy
1	Supports approval of conceptual plans by qualified OHV specialist
1	Supports formation of ad hoc OHV advisory committee
1	Supports spacing intersection apart by 10 minutes travel time
1	Review user needs analysis done for Statewide Trail Plan
1	Supports considering needs of campers based in Monache and those coming in via trails
3	Concerned with impacts to cultural resource sites
3	Concerned with disturbance of cattle from bikes
11	Concerned with adequate patrols and law enforcement
1	Concerned with guarantee of future maintenance funding
37	Concerned with impacts on deer herd
1	Concerned with impacts on wildlife
7	Concerned with vehicle trespass (physical, noise) in wilderness
17	Concerned with maintenance of existing natural character
7	Concerned with protecting privacy and rights of private landowners
3	Concerned with impact on soils from trail erosion
23	Concerned with safety of bike riders due to improved hunter access via Monache Mtn. & Bakeoven bike trails
7	Concerned with keeping 4WD access to Monache area due to old age and grandchildren
2	Concerned with decreasing amounts of routes in future (opposed)
2	Concerned with keeping area roaded for accessible weekend recreation

R5 OHV POLICY

The following paper was presented at the National Trails Workshop in Denver, Colorado on, November 19, 1986, by Region 5 Engineer, Greg Watkins.

R5 POLICY

It is policy in Region 5 that Off Highway Vehicles (OHV's) and unlicensed drivers may operate on maintenance level 2 roads, provided the road has not been specifically closed to such use by a Forest Supervisor's Road Order.

This policy is different than most other Regions which do not legally permit unlicensed or non-street legal OHV's to operate on any Forest Development Road regardless of its maintenance level. (In actual practice, considerable use of Forest Roads by OHV's is occurring for several reasons including lack of law enforcement personnel and that it is not viewed as a problem in many locations) The question of interest to the other Regions is how did Region 5 arrive at this more liberal policy regarding OHV use on maintenance level 2 roads since Level 2 roads constitute approximately 50% of the Forest Development Road mileage.

OHV REGULATIONS

36 CFR 212.7 states "Traffic on ALL Forest Development Roads is subject to State Traffic Laws where applicable, except when in conflict with the rules established by the Forest Service under 36 CFR 261." Under California Vehicle Law Section 38000, drivers licenses and highway vehicle registration do not apply to use on "roughly graded" roads. By Forest Service definition, Maintenance Level 2 roads are maintained in a rough state with ruts, rocks, etc. and qualify as roughly graded roads by State definition. In addition, the Federal Highway Safety Act is not applicable to level 2 maintenance roads per agreement with the Federal Highway Administration. This distinction further helps to differentiate Maintenance Level 2 roads as non-highways.

RECOGNIZING LEVEL 2 RDS

The next obvious question is: How does a user recognize a level 2 road. Region 5 is implementing a vertical route numbering system to identify level 2 roads. All other forest development roads are marked with the standard rectangular shaped road marker or the distinctive route marker. The OHV user must see a vertical route number before he knows the road is available for OHV use.

CALIFORNIA'S "COMBINED USE" LAW - AB #1201

California has passed a "Combined Use" law pertaining to OHV use on public roads. Combined use permits OHV's and public vehicles to operate together on the same road if all of the following conditions are met:

1. The road segment is designated by the local authority and approved for combined use by the Highway Patrol.
2. The segment of road designated does not exceed 3 miles.
3. OHV use is during daylight hours.
4. The OHV has an operational stoplight.
5. The operator of the OHV has a valid drivers license.

R5's OHV QUESTIONNAIRE

A questionnaire regarding OHV use and regulations was recently sent to each Forest in the Region. One question asked whether the Forests had situations where combined use on level 3, 4, or 5 maintenance level roads was needed. All but one Forest indicated situations where combined use authority was needed. Another question asked if there was a need to be able to permit combined use for unlicensed drivers. 75% responded affirmatively. Based on this response, and on the fact that unlicensed operators are driving on maintenance level 3, 4, and 5 roads, Region 5 is looking at adoption of a Forest Service authorized

Combined Use" regulation. It would go beyond that permitted by State law and permit use by unlicensed drivers. The Forest Service "Combined Use" regulation would be implemented under 36 CFR 265.54 as an exception provided for in 36 CFR 212.7.

FOREST SERVICE COMBINED USE REGULATION
Combined use of Forest Development roads would be permitted when all of the following conditions are met:

1. The road or segment of road is designated by the Forest Supervisor.
2. The road is appropriately signed to warn motorists of the combined use.
3. Use is during daylight hours.
4. The OHV has a valid "Green Sticker" tag.
5. The vehicle and operation complies with other CFR regulations regarding recklessness, drunk driving, vehicle brakes, etc. in 36 CFR 261.13.
6. Unlicensed drivers are under the direct supervision of a responsible adult on a similar vehicle, OR the unlicensed driver has a certificate of completion of an approved safety course in OHV operation.

- Note - No mention of length of segment or brake light or drivers license.

DISCUSSION
The question is asked: Why should the Forest Service go beyond the authority of the State's Combined Use regulation? (A similar question could be asked in other Regions where State law does not permit OHV's even on level 2 roads.) The rational for developing this Forest Service Combined Use regulation is:

- The Forest development road system is different than most State and County roads.
-Many are dirt or gravel and the traffic volumes are significantly less than on State and County roads.
-Use of roads by unlicensed drivers is occurring today. Enforcement is either impossible and/or not warranted by safety concerns.
-This policy stresses safety & education for minors operating OHV's similiar to NRA safety courses for hunting licenses.
-Oregon has adopted a safety course requirement for minors driving OHV's.
-Legalizing OHV use creates a better tort liability defense than to know the use is happening in conflict with State law and not attempt to prevent such illegal use.
-Safety conflicts between unlicensed OHV's and street legal vehicles are not expected to create an unacceptable risk since the local Forest Supervisor would designate combined use on a case by case basis.
-In reality, head-on collision between unlicensed drivers on an OHV trail is more probable than on low volume roads.
-OHV use is a valid use on the National Forests and we need to be able to provide for such use where it makes sense.
-OHV use on many Forest Development roads is relatively safe.